New England Deaconess Hospital

1974 Annual Report

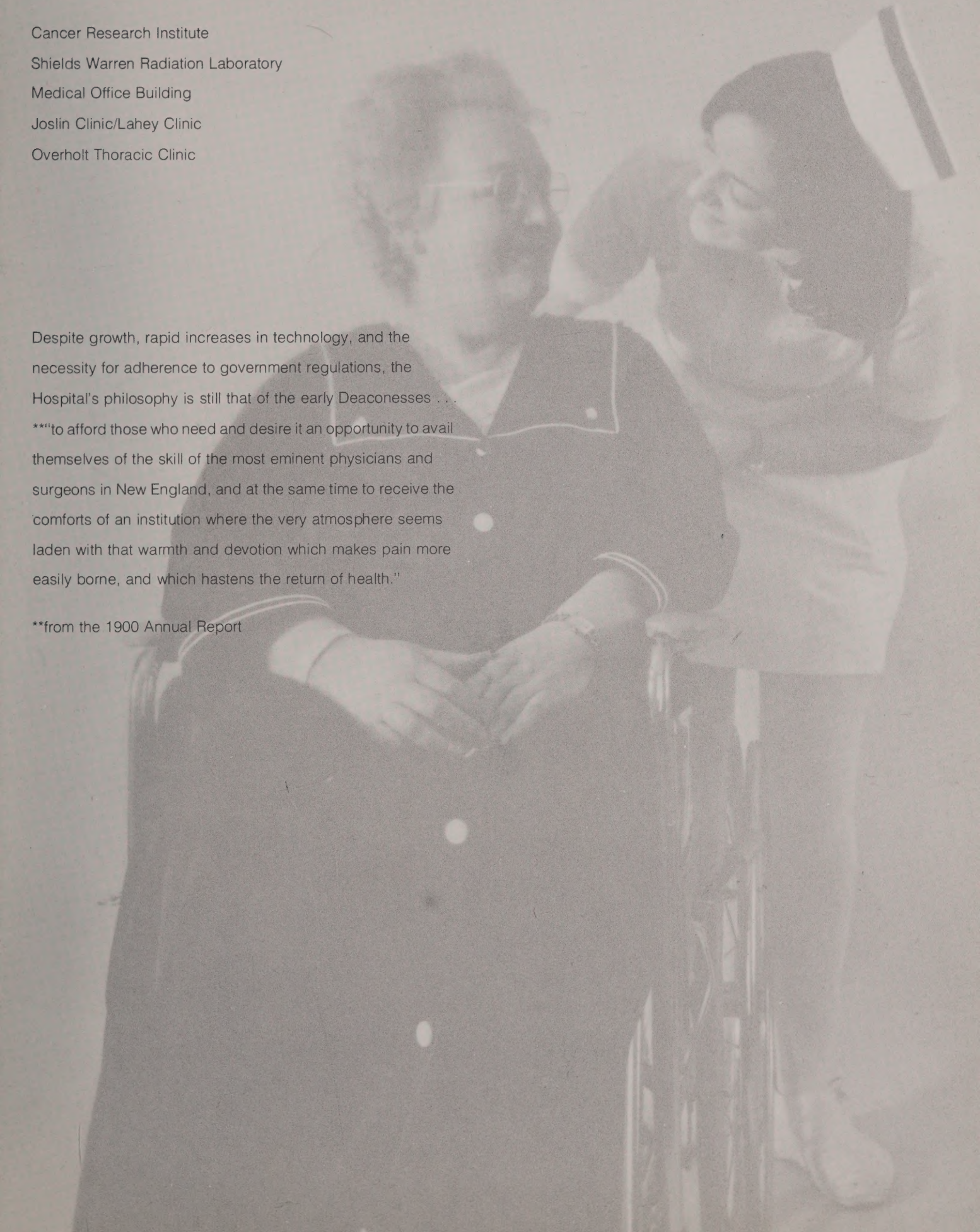
Cancer Research Institute

Shields Warren Radiation Laboratory

Medical Office Building

Joslin Clinic/Lahey Clinic

Overholt Thoracic Clinic

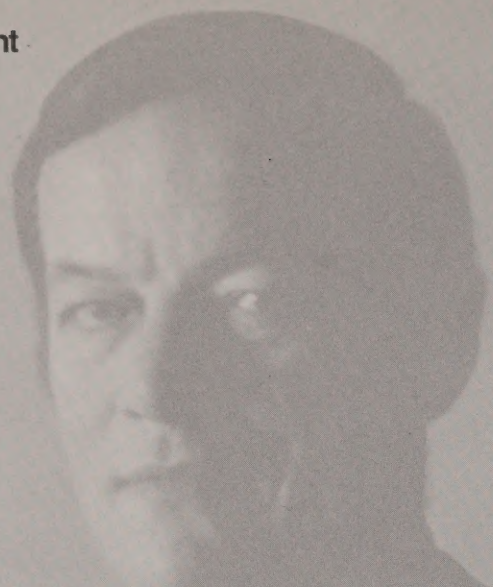


Despite growth, rapid increases in technology, and the necessity for adherence to government regulations, the Hospital's philosophy is still that of the early Deaconesses . . . **"to afford those who need and desire it an opportunity to avail themselves of the skill of the most eminent physicians and surgeons in New England, and at the same time to receive the comforts of an institution where the very atmosphere seems laden with that warmth and devotion which makes pain more easily borne, and which hastens the return of health."

**from the 1900 Annual Report

Comments by the President

C. Vincent Vappi



The past year at the Deaconess Hospital has again been a challenging and eventful period. With the passing of wage and price controls in May, the Deaconess had to respond intelligently to rapidly increasing costs of the materials and services it purchases, to the need to maintain equitable compensation levels for our valued staff, and at the same time to be aware of the increasing pressures from government, insurers and the public at large to hold down the cost of delivering health care. All the while we could not lose sight of our fundamental goal of maintaining the excellence of the Hospital in both the immediate and long term future. Progress toward that end was made in several areas.

Last year we reported on the start of construction of our new Clinical Laboratory and Radiation Therapy Facility and on the proposed new School of Nursing. The Laboratory Building is underway, with foundations complete and the steel framework being erected. Completion of this facility is currently scheduled for December 1975, somewhat delayed from earlier forecasts due primarily to strikes. The new Nursing School was certified as to need earlier this year, drawings and specifications were completed, and construction bids were taken in October. Indicated project costs appeared to be about $5,750,000, up from preliminary estimates a year ago of $4,000,000, due partly to additional work incorporated during the development of plans, and partly to escalating construction costs. The Architect is working with the Contractor and the Hospital to reduce the project cost to $5,000,000, a figure the Hospital feels it can accommodate, and one we are optimistic in achieving. If all goes well, we will be under construction this fall and hope to complete in the summer of 1976.

With the start of the Nursing School we will lose parking spaces, and we expect shortly to lose more parking spaces at the former Convent site as a project begins there. These two events will put great pressure on our parking facilities, which are even now completely full during some peak periods. It appears necessary to take immediate steps to complete the second phase of the Pilgrim Road parking garage, thereby adding about 300 spaces to compensate for those being lost.

As reported last year, the Laboratory Building is being financed from the proceeds of Massachusetts Health and Educational Facilities Authority financing. We plan to finance the Nursing School from available unrestricted funds, mainly a $2,500,000 grant for this purpose from the Kennedy Foundation, plus the proceeds of a capital fund campaign being formulated by the Hospital's Development Council. This Council, chaired by Colby Hewitt, Jr., has in a systematic way addressed the problem of increased financial support for the Hospital's continuing need for unrestricted capital funds. The Council has added vigor to our annual giving program and has instituted a program for deferred bequests.

Last year we reported that the Long-Range Planning Committee's "Proposal for Meeting Long-Range Objectives of the New England Deaconess Hospital" had been endorsed in principle by the Medical Administrative Board and approved by the Executive Committee. Since that time, a great deal of effort on the part of the Long-Range Planning Committee, members of the Medical Staff and the Hospital's Officers and Administration has been devoted to implementing some aspects of the "Proposal." As we enter the new year, we believe we have worked out the mechanics of making the Chairman of the Department of Medicine together with a limited number of supporting physicians full time hospital based. These moves, which are compatible with the "Proposal," we believe will provide the base from which the Hospital will be able to provide

support for certain specialists needed to strengthen the Hospital's Medical Staff and put the Hospital in a better position to meet the demands of the future.

In recent years, and with increased momentum, the role of Trustee of a Hospital has been changing. In addition to the traditional function of securing the funds needed for new facilities, Trustees in a series of court decisions have been placed clearly in the position of being legally responsible for all aspects of the Hospital's operations, including the quality and efficiency of medical care provided. As we have seen, the constraints under and the environment in which the Hospital operates have been increasingly changing, a pattern likely to accelerate in the future with the expected initiation of a National Health plan. To meet these demands, the Board of Trustees must be more involved and responsible. To that end, we have created a special Committee on Trustees under the chairmanship of Mr. William Tyler to examine the role of the Board of Trustees at New England Deaconess Hospital, and to make recommendations intended to increase the effectiveness of the Trustees. The Committee has been hard at work, and we hope to have its report in the near future.

Our thanks should again be given to those members of the Trustees, the Administration and the Medical Staff who have worked so hard together during the year to keep the Deaconess Hospital in the forefront of medical institutions.

Comments by the Executive Vice President

R.D. Lowry

The health care world of today bears little resemblance to what it was before the passage of Medicare and Medicaid. The preamble to the Medicare Law reads as follows: "Nothing in this title shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided, or over the selection, tenure, or compensation of any officer or employee of any institution, agency, or person providing health services: or to exercise any supervision or control over the administration or operation of any such agency, institution, or person." While these words are still in the Law, they are ignored, and the government is now definitely exercising control of the practice of medicine and of the administration and operation of our health care institutions. Today we have legislation seeking to regulate practice which increases hospital costs, and at the same time restricts the hospital's ability to meet those costs.

We have controls on utilization. Our critics allege that there are 202,000 empty beds in the U.S. every day of the year, a 77% occupancy rate. The "Wall Street Journal" has estimated that this means $6 billion a year in cost to the economy. Those who are critical of the health care industry enjoy quoting these statistics, but, for many hospitals, these are sweeping generalizations. The average daily census for our hospital for the past year was 92.6%.

There are controls of capital expenditures through the Certificate of Need Laws. I don't dispute the fact that these laws are necessary. However, after all of the planning of a project has been completed, the architects have furnished plans and specifications, and the need soundly documented, is it reasonable, in these days of spiraling economy, for us to have to wait one full year before gaining approval from the Public Health Council to proceed with the project? This has happened to us three times, approval for our cardiac catheterization facility, for our laboratory and radiation therapy facility, and for a new facility for our School of Nursing. Because of the escalation in building costs these delays have cost us hundreds of thousands of dollars. In addition we have had the heavy expense of preparing the applications which has run well into five figures in each case. These efforts to control hospital costs have had the opposite effect at our hospital.

We have controls on hospital income, controls on the quality of care. In some governmental programs there is an attempt to control who should be on governing boards by mandating representation on boards of "Certain Minority Groups" and "Community Representatives." Just what is the "Community" of the Deaconess Hospital?

There are efforts to control manpower. Some feel that residency programs should be controlled so that the numbers of specialists can be controlled. Perhaps this is desirable, but telling doctors in what areas they should specialize seems to be the same as telling an individual who goes into hospital administration that he cannot take a course in running a general hospital but must specialize in running a neighborhood health clinic, or a law student that he must specialize in tax laws, or an engineering student that he must become a sanitation engineer. Certainly for many individuals this would mean the end to the freedoms we have long enjoyed.

Hospital costs have become a major focus of debate and discontent in our country. Everyone agrees that the cost of health care has risen sharply, and *apparently* at an unreasonable rate

when compared with most other segments of our economy, but there *is* no comparison. Hospital costs compared with what? The cost of a day in the hospital is much less expensive than a pleasure trip to San Francisco, but compared to the average person's day's pay it may seem extremely high.

The reasons for the enormous rise in health care costs in the last 20 years are numerous. The most important factor was the absolute necessity to bring salaries and wages in line with other industries and businesses. As most of you know, salaries and fringe benefits account for approximately 68% of the total hospital budget. The second factor was and continues to be the fantastic advancement in medical technology which has resulted in the development of life saving but often extremely expensive equipment requiring additional highly-trained personnel. These are but two of the factors, when coupled with the controls under which we must now operate, that have now resulted in many hospitals having operating margins near or at the danger level. Recently the President of the United Hospital Fund of New York stated that 17 (30)% of New York City's non-profit hospitals are technically insolvent. These institutions are running deficits totaling approximately $63 million this year for outpatient and emergency services because of the increasing numbers of patients who lack outpatient coverage and are unable to pay. One of the hospitals indicated that without new funds it would have to begin either phasing out emergency department operations, or limiting admissions to those with the ability to pay. The financial plight of these hospitals began before there was a sharp rise in unemployment. Imagine the problems they will face during the coming year.

Because of the great part the government plays in the financing of health care, there is little question that many controls, most importantly cost controls, will be with us for many years. Automatic reimbursement for all costs is a thing of the past. Our budgets will be determined on the basis of projected budget for the ensuing year, and this has serious pitfalls because there are always unexpected expenses, such as the breakdown of a major piece of equipment or when a storm or some other force makes it necessary to spend large sums of money for repairs. The most important aspect of the hospital's operations in the future is going to be financing. The maintenance of excellence is not inexpensive.

We have two choices. One, we can sit back and let society move in and make decisions for us; and, if we do, we can be sure that many of their decisions will not be sound because they will be making these decisions with little knowledge of all that is involved in the operation of our health care institutions. This will result in a decrease in the quality of care and only the almighty dollar will be considered.

The other choice is for the medical staff, trustees and all those connected with the hospital to go all out in an effort to become part of the decision making process. There is a natural reluctance on the part of physicians and many other individuals to become involved in politics, but we are now in a political society and we must recognize that we all have a part to play.

The trustees must carry the heaviest responsibility for being politically active when issues greatly affecting the hospital are being debated. The trustee of the 1970's must be well informed and more active. There must be trustees that the hospital can send to elected and appointed officials to argue its case. He or she has to be someone with persuasive power who is interested and willing to be a part of society's decision making process.

The day has gone when trustees can come to infrequent meetings and rubber stamp the reports. They must become part of the process that determines what society wants with respect to the ultimate health care problems.

The role of the trustee has changed. Courts are now finding trustees legally liable for the financial health of the hospitals, for the quality of the medical staff and the quality of care the hospital provides. The ultimate responsibility for all that occurs at the New England Deaconess Hospital rests with the Trustees and this responsibility cannot be delegated.

These are the most challenging times in the history of our hospital. During this past year a tremendous amount of time has been given by your officers, members of the Executive Committee, and other special committees in behalf of the Deaconess. We are entering our new fiscal year in good condition. We continue to run the highest census of any short term, acute hospital in the city of Boston. While we have hundreds of minor problems, none are insoluble, although it is impossible for us to find solutions to all problems that will please everyone. We are not, at present, plagued with financial problems. So we are asking for your support, not to pull us out of major difficulties, but to help in our efforts to maintain a high degree of performance.

During the coming year we expect to admit approximately 14,000 patients and our employees work days, nights, weekends and holidays to provide the services they require. Many employees are never seen by our patients but, nevertheless, play a large part in providing for each patient's care and treatment, and each one has our sincere gratitude. A hospital isn't a group of buildings, it is a large group of many talented persons working together. In addition to thanking our employees, I wish to pay tribute to our medical staff, Trustees, Members of the Corporation, and the Friends of the Deaconess who all contribute so much to our hospital in their own special ways.

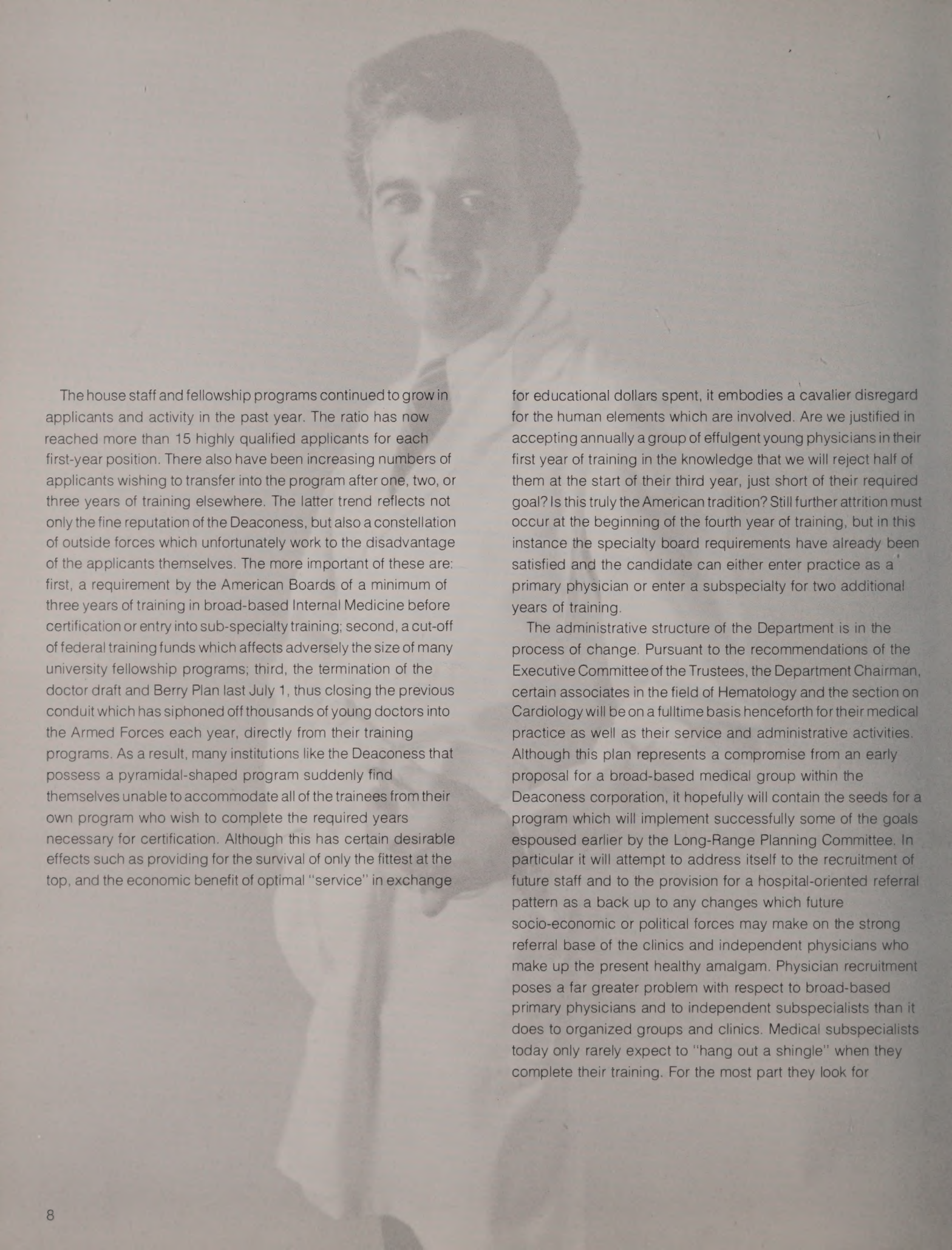
Department of Medicine

James L. Tullis, M.D., *Chairman*

The past year has been eventful in the Department of Medicine. The workload continued to increase. Approximately 65 percent of all hospital admissions were for medical diagnoses. This now makes the Department the largest in New England and twenty-fourth in the nation in terms of beds serviced by medical house officers. However, size alone does not determine quality. All of the internal efforts have been directed, therefore, to attempts constantly to raise and to update performance through programs of continuing education, service and research. The staff physicians of the Deaconess traditionally have prided themselves on the delivery of high quality medical care. This is a performance which is both laudable and factual. However, as physicians all of us must guard against complacency or reflection on past achievements. If we state that we provide the best medical care possible, we are implying that less satisfactory care exist elsewhere. To what are we comparing our performance? Other countries? Other parts of America? Other institutions in our own region? Other doctors? Or are we hopefully comparing our performance to the best of which we ourselves are capable? Only in the last circumstance may one relax from his striving for improvement or change.

Teaching activities within the Department during the year were divided into three categories of instruction: conferences designed for the senior staff as part of their continuing medical education; ward rounds for the house officers and fellows as part of their formal post doctoral training, and didactic seminars, classroom exercises, and one-to-one bedside instruction for Harvard students. One of the highlights of the teaching program each year is the one-week presence of a visiting chief. This stimulating exercise, financed through the generosity of the MacPherson Fund, brought Dr. Scott Swisher, Professor of Medicine, and Chairman of the Department of Medicine at Michigan State as our Chief Pro-Tem in October.

The visit is capped each year by a banquet supported by gifts from the senior staff. This provides an opportunity for them to become acquainted socially with the house staff in a manner which is far removed from their interactions of daily work. The Department has been privileged to enjoy other visiting lecturers for shorter stays during the year. These have been supported by the Joslin and Lahey Clinics, and included Dr. W.J.H. Butterfield, Vice Chancellor of the University of Nottingham in England and Professor Norman Levinsky of Boston University School of Medicine. Activities of this and similar types undoubtedly will increase as the need for constant updating of factual knowledge continues to make itself evident. Some of the senior staff already sense this trend as revealed by their willingness to undergo voluntary reassessment of knowledge in a program of the American College of Physicians last summer. Although fully certified previously a few also went so far as to sit again for their specialty board examinations in order to determine with certainty whether or not they were keeping abreast of new advances in medical knowledge. This seemingly masochistic act represented a tremendous dedication of time and effort on the part of a group of already overworked physicians who would accept nothing less than a personal striving toward perfection. Whether it will encourage their peers to do likewise or whether others in the profession will wait until a consumer-oriented society insists on re-examination or relicensure remains for the future to determine. Meantime, voluntary goals rather than obligatory regulations always should be sought.



The house staff and fellowship programs continued to grow in applicants and activity in the past year. The ratio has now reached more than 15 highly qualified applicants for each first-year position. There also have been increasing numbers of applicants wishing to transfer into the program after one, two, or three years of training elsewhere. The latter trend reflects not only the fine reputation of the Deaconess, but also a constellation of outside forces which unfortunately work to the disadvantage of the applicants themselves. The more important of these are: first, a requirement by the American Boards of a minimum of three years of training in broad-based Internal Medicine before certification or entry into sub-specialty training; second, a cut-off of federal training funds which affects adversely the size of many university fellowship programs; third, the termination of the doctor draft and Berry Plan last July 1, thus closing the previous conduit which has siphoned off thousands of young doctors into the Armed Forces each year, directly from their training programs. As a result, many institutions like the Deaconess that possess a pyramidal-shaped program suddenly find themselves unable to accommodate all of the trainees from their own program who wish to complete the required years necessary for certification. Although this has certain desirable effects such as providing for the survival of only the fittest at the top, and the economic benefit of optimal "service" in exchange for educational dollars spent, it embodies a cavalier disregard for the human elements which are involved. Are we justified in accepting annually a group of effulgent young physicians in their first year of training in the knowledge that we will reject half of them at the start of their third year, just short of their required goal? Is this truly the American tradition? Still further attrition must occur at the beginning of the fourth year of training, but in this instance the specialty board requirements have already been satisfied and the candidate can either enter practice as a primary physician or enter a subspecialty for two additional years of training.

The administrative structure of the Department is in the process of change. Pursuant to the recommendations of the Executive Committee of the Trustees, the Department Chairman, certain associates in the field of Hematology and the section on Cardiology will be on a fulltime basis henceforth for their medical practice as well as their service and administrative activities. Although this plan represents a compromise from an early proposal for a broad-based medical group within the Deaconess corporation, it hopefully will contain the seeds for a program which will implement successfully some of the goals espoused earlier by the Long-Range Planning Committee. In particular it will attempt to address itself to the recruitment of future staff and to the provision for a hospital-oriented referral pattern as a back up to any changes which future socio-economic or political forces may make on the strong referral base of the clinics and independent physicians who make up the present healthy amalgam. Physician recruitment poses a far greater problem with respect to broad-based primary physicians and to independent subspecialists than it does to organized groups and clinics. Medical subspecialists today only rarely expect to "hang out a shingle" when they complete their training. For the most part they look for

opportunities in a group, partnership or clinic. The complexity of their specialty practice gives inadequate time for the equally complex managerial aspects of their activities. In the case of certain medical subspecialties this is augmented further by the need for access to highly sophisticated gadgetry which is essential to their activity. This type of instrumentation often is available only in hospitals like the Deaconess, scaled up to the delivery of intensive care. The Department was fortunate this year to recruit an additional cardiologist to strengthen the service aspects of ECG interpretation, cardiac catheterization and CCU supervision. None of the several candidates who were screened had any plans to enter a solo private practice.

Entirely different, but equally poignant forces tend also to limit the ascension of new primary physicians to the Independent staff in Medicine. The principal of these is the shifting population away from city centers and adjacent suburbs to remote suburbs, villages, and towns. A busy housewife, already harassed from shuttling between shopping centers and schools, will think twice before she will embark on a trip into city-center traffic just to see a physician at 110 Francis Street for ambulant medical care. Perhaps the quality of the treatment she obtains will be better, but who rides only in a Continental? Other forces pulling primary physicians away from solo practice include such important considerations as improved coverage for night call and pooling of overhead expenses.

In this regard we are fortunate that our house staff in Medicine has fulfilled one of the roles predicted for it, and has helped to serve as a recruiting group for the Deaconess staff. Twelve out of the sixteen physicians who have joined the Independent staff in the past decade took all or part of their training here. Several also have joined other departments of the hospital as well as the staffs of the clinics. Without such a process of internal renewal our essential growth might be critically jeopardized.

Although a fulltime arrangement for a few specialists in the Department of Medicine does not speak to these broader needs of the Independent physicians, ample opportunity will exist to aid them in diverse other ways. The Department must gear itself to speak clearly and directly whenever asked to the multiple demands being placed on practitioners and help them in their relationships with the many governmental and quasi regulatory agencies which are infringing on their dedicated role as physicians. This important segment of the health care resources of America must be nourished and protected, especially within the hospitals which were the very source from which this strength derived.

Department of Surgery

Cornelius E. Sedgwick, M.D., *Chairman*

Evolution has not yet developed natural defenses to deal with the many major surgical diseases presently seen in our hospital. Clearly the advances in surgical techniques and practices that I have reviewed in recent annual reports are "iatrogenic." This euphemism meaning "physician-induced" is an appropriate characterization of the fact that the members of this department as well as other departments have made it possible for us to improve and extend the useful life of many patients who come to our hospital.

It is the purpose of my report this year to describe many of the instrumentations, equipment, and special teams present in the department that support the surgeon with their sophisticated practice of medicine and surgery.

Common to nearly all seriously ill patients is the need to support vital organ functions. The time is long past when the "routine vital signs" of measuring pulse, blood pressure, and taking the temperature provide the early warnings needed to make many life supportive systems effective. The techniques previously reserved for cardiac catheterization laboratories in patients having major heart surgery are now part of the routine care of the critically ill patients. These special "Swan-Gantz" catheters can be placed to measure the pressure in the many chambers of the heart and blood vessels of the lungs. This information, plus calculations derived from this data, greatly assist in designing proper fluid and electrolyte therapy as well as regulating sophisticated respiratory apparatus.

A furthur extension of these catheter techniques is the near continuous monitoring of the cardiac output during these acute phases of illness. We have the latest generation of these instruments. This ability using thermodilution catheters allows the mere injection of the ice cold water to be monitored and thus to calculate this important blood flow produced by the heart. The efficiency at which the heart is working, the amount of oxygen it is consuming, and the evaluation of various new lifesaving drugs can routinely be measured. A special physiologic profile computer program allows this information to be available to the surgeons within minutes of the time of the determination.

Critical care teams of various specialists in respiratory and metabolic care of the patient provide vital backup and support for the patients in our various intensive care areas.

New respirators combine the best of older models in controlling the volume of air the patients need as well as the optimal pressure. Important in respiration is the occasional deep breath or sign these new respirators can provide. Special resistors provide "PEEP" that also help keep the lung properly inflated. Artificial lungs for temporary support, similar to the artificial kidney, represent some of the advanced technology currently being evaluated in the department. These membrane oxygenators represent several generations of advancement from the original heart-lung machine.

The subspecialties have also produced advanced technology: Neurosurgery and otolaryngology operate through microscopes to allow extremely delicate work.

Probably the most exciting advance in neurosurgical instrumentation has been the use of the operating microscope. It has enabled us to perform operations heretofore impossible and hopefully will improve our results in more standard operations. With the use of the operating microscope, we have been able to perform transsphenoidal pituitary surgery both for pituitary ablation for breast and prostate cancer as well as for the removal of microadenoma of the pituitary gland, a procedure impossible from the transcranial approach. The microscope will enable us to perform intracranial vascular surgery, both bypassing block with superficial temporocortical artery anastomosis and even

endarterectomy of the proximal intracranial carotid and middle cerebral arteries. We have already used the microscope to remove arteriovenous malformations of the spinal cord and intramedullary spinal cord tumors, lesions that are almost impossible to remove satisfactorily without a microscope. The use of the microscope for other more routine surgical procedures has given us an appreciation of the anatomy and pathology which we could not have obtained in any other way. This year we plan to add television projection of the magnified image as well as videotape to help with our assistants and perhaps provide an educational tool. A major problem with intracranial surgery is swelling and increased pressure, now monitored by sensitive pressure gauges to provide early warning of any difficulties.

Next year we plan to begin monitoring our craniotomy and head injury patients with simultaneous intracranial, peripheral arterial and venous pressures. The instrumentation is already available at the New England Deaconess Hospital. This should provide us with two aspects of information: Hopefully it will predict a patient's clinical deterioration before obvious signs of clinical deterioration become manifest, thus giving us several hours of warning so that we can reverse deteriorating pathologic processes, and we should also be able to derive a great deal of pathophysiologic information from this.

A variety of fiberoptic instruments allows exploration and direct visualization of airways deep in the lungs and investigation of small ducts in the liver and pancreas as well as the entire large bowel.

The introduction and development of flexible fiberoptic endoscopy of the colon has become a most valuable diagnostic and therapeutic tool. From the diagnostic standpoint it has enabled early detection of large bowel cancer that has eluded regular evaluation and, on the other hand, has at times enabled avoidance of an exploratory laparotomy for diagnostic purposes. The major therapeutic application of colonoscopy has been in the management of polypoid disease of the rectum. Nearly every polypoid lesion warrants initial colonoscopic evaluation with the possibility of removing the polyp. Even a rather large sessile lesion can be removed with the colonoscope, avoiding abdominal operation. The synchronicity of polypoid disease of the colon makes this a useful preoperative diagnostic evaluation even if it is believed that the polypoid lesion observed on the radiograph would not suggest endoscopic excision.

Besides the many "big" instruments, advancement has been made in our filtration of blood transfusions to minimize the risk of this important therapy. New but simple techniques of measuring skin folds and arm muscle circumference provide estimates of body composition. Knowledge of these fat stores and muscle protein stores are important to the sophisticated management of many patients. Indeed, the leadership of the Nutrition Support Service with their use of intravenous feedings and the artificial gut techniques represents one of the major advances in the care of the modern patient along with antibiotics, heart-lung machine, dialysis, and so forth.

Thus, the department continues to provide the newest, latest, and most sophisticated instrumentation and the best care medicine has to offer our many patients. Instruments and machines, however, are only as effective and reliable as the people using them. We hope to continue to have both at the New England Deaconess Hospital.

The Cancer Research Institute

William V. McDermott, Jr., M.D.
Scientific Director

The Cancer Research Institute continues to maintain its integral role in cancer research with increasing concern for the disease as it relates to the patient. An important step in this direction was the appointment this year of a new Scientific Director, Dr. William V. McDermott, Jr., who is also Cheever Professor of Surgery at Harvard Medical School and Director of the Deaconess Harvard Surgical Service. Under his leadership, two new research activities are now located in the Institute. These are the Division of Transplantation and Immunology and the Division of Nutrition under the respective leadership of two members of the active surgical staff, Dr. Anthony P. Monaco, associate professor of surgery at Harvard Medical School and Dr. George Blackburn, assistant professor of surgery at the Medical School.

Dr. McDermott brought with him as Associate Director of the Deaconess Harvard Surgical Service, Dr. John Pikula, associate professor of surgery at the Medical School.

The Cancer Research Institute continues as an active member of the Association of American Cancer Institutes and Dr. McDermott, Miss Constance A. Langone, manager of the Office of Grants and Contracts and Mr. Robert D. Pence attended the semi-annual meeting of the Association in Detroit in June. The Institute is also a member of the International Union Against Cancer and was represented at the 11th International Cancer Congress held this year in Florence, Italy by Dr. Shields Warren, Scientific Director Emeritus of the Institute, and Dr. W. Eugene Knox, Senior Research Associate in the Division of Biochemistry and Professor of Biological Chemistry at Harvard Medical School.

Dr. McDermott serves on the Diagnostic Research Advisory Group of the National Cancer Institute and Dr. Monaco serves on Surgery A Study Section of the National Institutes of Health.

Three clinical programs to form a Hepatoma Center at the New England Deaconess Hospital, to initiate a Pancreatic Cancer Diagnostic Program and to carry out randomized evaluation of treatment of metastatic cancer in the liver are in progress.

Following are descriptions of the general research programs of the divisions of the Institute.

Biochemistry

The Division of Biochemistry under Dr. W. Eugene Knox extended its chemical definition of the nature of transplanted rodent tumors and found still more evidence that the metabolic mechanisms of these growths resemble undifferentiated (fetal) tissue. The goal is to identify a number of such enzymes that can be of practical use as markers of tumors, and, because these are essential for tumor growth, could be suitable targets for therapeutic agents. These pilot studies will be followed by similar work to be done on human tumors removed at surgery.

In addition to the professional, postdoctoral and technical personnel, an unprecedented number of nine students from various high schools and colleges collaborated in this work for all or part of the year. Reports and lectures on the research activities were given at four national and international scientific meetings. A second edition of the book describing these results was prepared for publication early in the coming year. (W.E. Knox: *Enzyme Patterns in Fetal, Adult, and Neoplastic Tissues*, Karger, Basel, 1972).

Dr. Knox helped to organize and give an important new course on tumor biology at Harvard Medical School. It was designed for

potential cancer researchers without medical training in oncology and it evidently filled a strong need since it will continue and be expanded.

Electron Microscopy

The Division of Electron Microscopy, under Dr. Micheline Federman, has continued to study osteogenesis at the light and electron microscopic levels. Having established solid data on normal development of rat calvaria, studies were started to examine the specific effects of certain hormones, such as parathyroid hormone, which are known to affect bone development and normal bone maintenance. These studies will lead not only to better understanding of normal bone, but also of bone diseases in humans. In addition, the department has also provided for colleagues in Boston and New York the unique technique of preparing thin undecalcified bone sections from human bone biopsies which is crucial for good diagnosis and treatment of bone diseases as well as for research in such diseases.

Experimental Pathology

Under Dr. Shields Warren, the Division has continued its research on radiation carcinogenesis and its training program in radiobiology, one of the very few programs to survive at least temporarily the drastic cut in National Institutes of Health training programs. Three graduate students were involved in this cooperative program with Boston University.

The department's research in radiation carcinogenesis has been primarily concerned with quantitation of dose-effect relationships, now of special importance as the economy is forced to depend increasingly on atomic power.

Effective July 1, 1974, Dr. Olive Gates retired as an employee but is continuing her effective research as a volunteer.

Dr. Warren resigned as Chairman of the NASA Life Sciences Committee but continued as a member of the Administration's top research advisory board, the Space Advisory Council. He also served as Chairman of scientific sessions at the International Congress of Radiation Research in Seattle and the American Society of Experimental Pathology at Atlantic City. He received the Distinguished Achievement Award of the Health Physics Society and the Skylab Achievement Award of NASA.

At the 11th International Cancer Congress in Florence, he presented a paper entitled "Parabiosis, Radiation and Carcinogenesis in Rats".

Growth Laboratory

Under the leadership of Dr. Olga Greengard, aided by the presence of two foreign scholars, the laboratory's scope of research on mammalian development has been extended this year to new areas of endeavor. The group, collaborating with a senior biochemist on sabbatical leave from Venezuela and a Fulbright Fellow from Spain, analyzed early post-natal brain development in terms of subtle biochemical features of cerebral synaptosomes. Using the rat as an experimental model, they began to investigate mechanisms whereby inborn metabolic abnormalities, manifested after birth, lead to mental retardation.

The cancer research of the laboratory has this year been centered on host reactions, especially on the "dedifferentiating" effect that a tumor transplanted into young rats exerts on distant, apparently uninvolved tissues.

A long term project, comparison of biochemical and morphological differentiation in liver, has been completed this

year. The accumulated knowledge about the changing enzyme patterns provide much more sensitive measures of late fetal and early postnatal development than do microscopic or electron microscopic examinations. This is highly relevant to the inadequate maturation of metabolic functions which is responsible for many perinatal medical problems. The increasing list of hepatic enzymes whose synthesis can be enhanced with the administration of appropriate hormones, points to possible therapeutic methods for correcting such functional deficiencies. During the year, Dr. Greengard served on the Human Embryology and Development Studies Section of the National Institutes of Child Health and Human Development.

Nutrition

The investigations of this department under Dr. George Blackburn provide scientific backup for the hospital's Hyperalimentation Service which is providing leadership in the fast growing field of clinical nutrition in the practice of medicine. The combining of interested staff, clinical and research fellows, a hyperalimentation nurse, a therapeutic dietitian and a pharmacist, has led to optimal nutrition support for many patients which in turn significantly influences the outcome of their illnesses. This is particularly true with the cancer patient who needs considerable support to take full advantage of the various cancer therapies. Storage of important basic information in the hospital computer allows for designing a precise nutrition program for each patient. Estimates of the nutritional status of the patients by objective calculations and measurements further improve the patient's care. The research laboratory thus is able to translate its research directly to the requirements of the hospital's patients.

Transplantation and Immunology

Investigations of immunological mechanisms are being conducted under the direction of Dr. Anthony P. Monaco.

Introduction of Specific Immunological Enhancement to Tissue Allografts: Specific augmented survival of skin allografts is achieved in antilymphocyte serum-treated mice when such mice are infused with bone marrow from the donor strain of skin grafts. It has been shown that the specific prolonged survival of the skin graft is due to the production of an enhancing factor in the serum, and the animals enjoying prolonged survival of the allografts have induced cell-mediated immunity to such grafts in force. However, due to the production of enhancing factors, such cell-mediated immunity does not cause rejection of the skin grafts. In terms of clinical applicability, patients receiving kidney transplants from cadaver donors might enjoy prolonged survival of such grafts if they are infused with bone marrow from the cadaver, and the possibilities of using frozen marrow are currently being investigated.

Studies on Immunological Detection of Carcinoma of the Bladder: It has been shown that an antiserum developed by immunization of rabbits with membrane antigenic extracts of human bladder carcinomas contains antibody to an antigen which seems to be associated with bladder cancer. Preliminary studies reveal that the antiserum can detect preferentially urine from patients with bladder carcinoma and these immunological assays are currently being refined. It is expected that an

excellent simple screening assay for early detection of bladder cancer can be achieved.

Immunological Detection of Human Breast Cancer: An antiserum to membrane antigenic extracts of human breast cancer is currently being developed which can hopefully be utilized to detect an antigen in human breast cancer. Rabbit antisera to human breast cancer, to normal breast tissues, and to benign breast disease are currently being developed and it is hoped that breast secretions can be analyzed for the presence of a breast carcinoma antigen. When available, the antisera will be utilized to study secretions from the opposite breast of mastectomy patients, who should provide an excellent population to study with this new immunological assay for the early detection of breast cancer.

Studies of B.C.G. Stimulation of Mice Bearing Murine Fibrosarcomas: Chemically induced murine fibrosarcomas and subcutaneous tumors have been shown to be extremely sensitive to treatment with B.C.G. adjuvant. B.C.G. injected intralesionally induces regression of hepatic and intraperitoneal metastases and is currently being evaluated. Since many patients with abdominal malignancies succumb due to the development of liver metastases, a system is being developed to see if regressions obtained by intralesional injection of subcutaneous tumors can also be obtained by intralesional injection of hepatic metastases. Such metastases are injected with various doses of B.C.G. to determine the regressive effect of intralesional B.C.G. in hepatic metastases.

Tumor Registry

This year has been distinguished by more active interchange between the researchers of the Cancer Research Institute and the other medical activities of the New England Deaconess Hospital. The Division of Biochemistry, under Dr. Knox, contributed by donating funds, workers and supervision to set up the new computerized Tumor Registry under the direction of a subcommittee of the hospital's Cancer Committee. In less than one year, the new registry has become operational. The total hospital experience with cancer in the past four years is now immediately accessible, and intensive clinical use of this facility is expected.

Research Support and Facilities

Research support in the amount of $949,610 was granted to the Hospital for the activities of the Cancer Research Institute and was managed by the Office of Grants and Contracts under Miss Constance A. Langone. Support came from the National Cancer Institute, the National Institute for Arthritis, Metabolism and Digestive Diseases, the National Institute for Child Health and Human Development, the General Research Support Branch of the National Institutes of Health, the U.S. Atomic Energy Commission, and the John A. Hartford Foundation.

Research facilities of the Institute benefited from the construction of a new library, and the purchase and installation of a new animal cage washer in the Animal Facility under the supervision of Mr. Brian Bernier. Histopathology under Miss Lilla Anderson and Medical Arts under Mrs. Kathryn Haley round out the research facilities.

The Joint Center for Radiation Therapy

Samuel Hellman, M.D., *Chairman*

This has been the sixth year of existence for the Joint Center for Radiation Therapy. During this past last year, approximately 1,900 new patients were seen representing an 8% increase in new patients. Of these, 560 were seen at the New England Deaconess Hospital.

The member hospitals for the Joint Center for Radiation Therapy remain the Beth Israel Hospital, Boston Hospital for Women, Children's Hospital Medical Center, New England Deaconess Hospital, Peter Bent Brigham Hospital, and the Faulkner Hospital; the latter an Associate Member.

The personnel for the Joint Center for Radiation Therapy now number 100. There have been no increases in equipment within the Joint Center for Radiation Therapy. Currently, patients are treated on the 12 MeV linear accelerator at the Peter Bent Brigham Hospital or one of the three 4 MeV linear accelerators located respectively at the Beth Israel Hospital, New England Deaconess Hospital and Peter Bent Brigham Hospital. We are now running at capacity for this equipment with frequent waiting lists. Because of this, we are anxiously awaiting the completion of the new radiation therapy department at the New England Deaconess Hospital. This new facility will unify and expand the radiation therapy service at the New England Deaconess Hospital. With the addition of a new 12 MeV linear accelerator as well as appropriate supporting facilities the capacity of the Center as a whole will be increased.

The Radiation Therapy Treatment Planning Center at the Parkway Division of the Boston Hospital for Women is now being used at capacity. Treatment planning for all patients, regardless of hospital of origin, is being done at the Planning Center. Most patients are required to go to the Planning Center for measurements of treatment simulation. Facilities there include the radiation therapy simulator, an ultrasound scanner for tumor localization, and a variety of shops for fabrication of beam modifying devices. In addition, a radiation therapy treatment planning computer is actively used.

Drs. William D. Bloomer and Robert L. Goodman, both trained at the Joint Center for Radiation Therapy, have joined the professional staff of the Center.

Dr. Bloomer's primary responsibilities will be at the Peter Bent Brigham Hospital, replacing Dr. Eric T. Weber who has left to join the staff of the Salem Hospital. Dr. Goodman will see patients primarily at the Beth Israel Hospital and the Children's Hospital Medical Center. Dr. Ronald Larsen has joined the physics staff and is assigned to treatment planning and located in the Treatment Planning Center.

Teaching activities at the Joint Center continue to grow. Currently, there are 10 trainees in the residency program. Five residents finished their training in July, 1974. Drs. Bloomer and Goodman joined the staff of the Joint Center; Dr. Cleo E. Dymott accepted a faculty position at the University of California at San Francisco and appointment to the staff of the Mt. Zion Hospital. Dr. Diana Nelson continues her research, working in the laboratories of physiology at the Harvard School of Public Health. Dr. Donald R. Weiss joined the staff of the Elliott Hospital in Manchester, New Hampshire.

In addition to the national need for radiation therapists, there are severe shortages in radiologic physics and in radiation therapy technology. Our programs in both these areas continue to expand. At present, the program is radiologic physics in threefold. The programs leading to a Master's or Ph.D. degree run in collaboration with the Harvard School of Public Health. At present there are 4 students in the Master's program and 5 in the Ph.D. program. In addition, a third program has been added this year and that is a postdoctoral fellowship program for physicists who have become interested in the problems of medical physics. We currently have 3 postdoctoral fellows. The radiologic technology program is twofold; a program directed by the Joint Center for Radiation Therapy independently and one in

collaboration with the Quinnipiac College in New Haven. There are currently 12 students in training; 7 of these are from Quinnipiac.

The laboratory research efforts for the Joint Center for Radiation Therapy are located primarily in the Shields Warren Radiation Laboratories. The clinical aspects of research are, of course, carried out in our affiliated hospitals. Major areas of investigation are:

Immunology of an Experimental Tumor

Drs. Stanley E. Order and Robert C. Knapp continue to study an experimental ovarian carcinoma in mice. They have shown that an antisera developed to a tumor-associated antigen of this tumor can be used as effective therapy in the treatment of established ovarian carcinoma. Currently, methods of optimizing this therapy and understanding its mechanism are being performed. In addition, human ovarian tumor antigens have been isolated and an attempt to develop an antisera to them is being made. It is hoped that these animal experiments will be a prototype for human application.

Dr. Theodore L. Phillips, on sabbatical leave from his position as Professor and Chairman of Radiation Oncology at the University of California, San Francisco, has worked with Dr. Stanley Order, in characterizing the tumor antigens associated with a fibrosarcoma of mice. This latter tumor is very useful since it will grow both *in vivo* and *in vitro* and the effects of therapy can be quantitated quite precisely.

Immunology of Hodgkin's Disease

Dr. Order continues his work on understanding the antigens associated with Hodgkin's disease. There appear to be two such antigens. One is a ferritin. An antisera developed to this antigen has been radioactively labelled by Drs. Bloomer and S. James Adelstein, and this material has been used in one patient for tumor localization. In this first experience, dramatic tumor localization was shown and we are very optimistic that this research will yield new methods of diagnosing and localizing Hodgkin's disease.

X-Ray Damage of Mammalian Cells and Its Repair

Dr. James A. Belli has been studying the damage which radiation inflicts upon the DNA of mammalian cells. Such damage is most important since it is this material that is concerned with the cell's ability to divide and survive. In addition, Dr. Patricia Henson has joined the staff and is specifically working on studies of the DNA of mammalian cells in culture.

X-Ray Chemotherapy Interactions

Drs. Anthony J. Piro and James A. Belli have been studying the mechanisms of interaction between clinically-used chemotherapeutic agents and x-ray in order to understand how best to combine these agents to maximize damage to tumors and minimize damage to normal tissues. Drs. Piro and Belli have been studying Actinomycin D and Adriamycin using a special tissue culture technique which mimics tumor cell physiology.

Dr. Hellman has been studying the drug Adriamycin and its effect on mouse bone marrow stem cells. In both these laboratories, modification of the radiation response, specifically in the ability of chemotherapy-treated cells to repair radiation damage has been noted. These have important clinical implications.

Studies of Hematopoietic Stem Cells

Drs. Hellman and Goodman have been studying bone marrow stem cells and their ability to produce formed blood cell elements. Dr. Goodman has developed an assay for the stem cell's ability to produce platelets. This ability is compared with that to produce granulocytes and erythrocytes by techniques already developed in this laboratory. An assay for the stem cell's

ability to make lymphocytes has also been developed during this year and now it will be possible to study these four differentiation pathways of the stem cell in concert. This is important if we are to understand and modify the effects of chemotherapy and radiation therapy on the bone marrow.

Lymphocyte Radiation Biology

Further studies of the effects of radiation on lymphocytes have been done by Drs. Belli, Timberlake and Hellman who have found that the DNA of lymphocytes appear more sensitive to radiation than other cells and that the DNA in general is more fragile and repairs less efficiently. These molecular events may have important physiological significances.

Improving the Distribution of Radiation to Tumors and Minimizing that to Normal Tissues

Drs. Bengt E. Bjarngard and Peter Kijewski have been developing techniques of "dynamic treatment," allowing for patient and machine motions to be carefully controlled by computer in order to maximize the dose delivered to the patient while sparing important normal tissues. This work is being expanded and a large combined research effort of Harvard and MIT is being led by Dr. Martin B. Levene with participation of Joint Center and MIT faculty in an attempt to use the talents of both to develop optimum methods of treatment of patients with radiation therapy.

Clinical Studies

Clinical studies of patients with Hodgkin's disease during the last year have been important in understanding the role of splenic involvement in the disease. Using modern techniques of radiation therapy the majority of patients with involvement of the spleen appear to be cured of their Hodgkin's disease.

The clinical results of the first 100 patients treated radically for breast cancer in the Joint Center for Radiation Therapy have been reviewed by Drs. Weber and Hellman. Remarkably good control figures have been found. Of the 39 patients having Stage I or Stage II disease, there have been no local failures. Systemic metastasis is still the major problem; especially in those patients with Stage III disease. These results suggest that radical radiotherapy may well offer a reasonable alternative to mastectomy.

Experience with low-dose rate irradiation appears to greatly increase patient tolerance to very large field irradiation and Dr. Robert Cassady has been studying this use for whole body radiation and abdominal radiation. Drs. John T. Chaffey, and Hellman have been studying whole body radiation as a treatment for generalized lymphosarcoma. This appears to be quite an effective treatment and is extremely well tolerated by patients. This use of radiation therapy as a "systemic agent" offers great promise.

Treatment Planning Center — A Model for Patient Care

Drs. Abraham Marck, Goran K. Svensson, and Mr. R. Leon Graff have been asked to present our concept of a planning center to the annual meeting of the American Society of Therapeutic Radiologists. It is expected that this will serve as a model for other departments in the Country. The advantages of the Planning Center appear to be in the intensive focus on this important aspect of patient care which assures optimization of treatment technique without unnecessary duplication.

In summary, the clinical responsibilities, training, and research activities of the Joint Center for Radiation Therapy continue to expand. With the development of the Sidney Farber Cancer Center and the Charles A. Dana Building, close ties between that center and the JCRT are currently being formulated. Perhaps more can be reported in next year's annual report concerning this as these arrangements are further developed.

Department of Pathology

Bradley E. Copeland, M.D., Chairman

Continued growth in service and education and development has been the hallmark of the Department for many years under the leadership of Dr. William Meissner and Dr. Shields Warren. These goals and traditions have continued during the past year. With our exciting new building in progress, a sizeable investment is being made to guarantee the excellence of our laboratory in the future.

During the past year our laboratory professional staff has been expanded to meet the needs for increased service for Deaconess patients and also worked in cooperation with the New England Baptist Hospital for their increased needs. Cooperative efforts continue with all the institutions which constitute our medical community including the Deaconess Independent Staff, Baptist Independent Staff, Lahey Clinic, Joslin Clinic, and Overholt Clinic. This coordination of service combines the strength of all the related groups and institutes and permits more comprehensive, in depth, patient service twenty-four hours a day, seven days a week.

New members welcomed to our staff include Dr. Charles Arkin, Dr. Rodger Haggitt, Dr. Khalid Butt, Dr. Carl Hirsch, and Dr. Daniel Grisley. We welcome the appointment of four new supervisors who have been members of our technical staff for many years: Mrs. Joanne Casella, MT (ASCP) Chief Medical Technologist; Mrs. Arlene Gough, MT (ASCP) Hematology Section Supervisor; Mrs. Anne Doherty, MT(ASCP) Chemistry Section Supervisor; and Mr. Brian Murphy, MT (ASCP) Night and Evening Supervisor. We are indeed fortunate to have their energy and enthusiasm.

There have been many additions to our equipment and services. Our Electron Microscopy facilities have been expanded to include new anaerobic culture equipment which will provide the most recent advances to patient care. Through the installation of new automation, Hematology has instituted more rapid chemotherapy outpatient service in platelet counts. A number of new coagulation tests were instituted.

The Blood Bank has continued to expand the Community Blood Donor program for hospital employees and their families. This plan helps to protect our patients and our employee families as well. Over 1,000 donations of blood have been given and we are proud to have three employees who have each already given over one gallon of blood. They are now members of the Gallon Donor Club. In cooperation with the Department of Medicine, the Frozen Blood Program has been transferred to the Blood Bank. Because of this capability, fifty patients were able to donate blood for their own elective surgery. It was possible to eliminate the blood replacement fee due to the combination of our own Community Blood program and the cooperation of the Massachusetts Red Cross. This is an example of the continuing efforts to maintain laboratory charges at the lowest possible level, consistent with high quality and rapid service.

Our clinical chemistry laboratory has been selected by the U.S. National Bureau of Standards as a reference laboratory in a nationwide methodology study. At the international level, our laboratories cooperate with the World Health Organization and the Commission on World Standards.

Under the diligent guidance of Mr. Donald Saabye, our Laboratory Communications section has developed to fulfill the increasingly complex role of fast accurate communications among the laboratory and the patients' records and the physicians.

Several important committees have developed which involve supervisors from the laboratory, nursing service, and administration services. These groups have been very effective in promoting and coordinating the increasingly complex laboratory service needs of patients and physicians.

Our educational efforts extend from the undergraduate, graduate, postgraduate to the post-postgraduate continuing education area. All professional staff members have participated as teachers in national postgraduate continuing education programs. Each section of the laboratory has shown leadership in this regard.

It has been a busy year of preparing and planning for the future. It has also been a busy year of definite progress in our goals of patient service and education for patient service.

Department of Diagnostic Radiology

Mirle A. Kellett, M.D., *Chairman*

This has been an exciting year in the Department of Radiology. Our workload has increased by 5% with the performance of over 47,000 examinations. One of the newer diagnostic modalities put into service was an ultrasound imaging machine. To date we have performed 547 exams in the first nine months of operation, and the requests for this service keep increasing as more of the staff become familiar with its diagnostic potentiality. One of its greatest assets is that it is a non-invasive technique. Consequently, there is no mortality or morbidity associated with it. It is now possible to set up a protocol to deal with kidney masses detected by kidney studies (intravenous pyelograms). If a mass is found, an ultrasound examination will determine whether it is a solid mass or fluid-filled cyst. If it is the latter, the cyst may be punctured using an ultrasonic probe as a guide. The contents can be analyzed in the laboratory and the cyst can be filled with a radiopaque substance to reveal its size and shape. If the mass turns out to be solid by ultrasonography, an arteriogram is performed to determine its nature, blood supply, and operatability of the mass.

Our new scintillation camera also went into service about the first of the year. It has greatly increased our volume and our diagnostic capabilities. As of August, we added a Radiologist — Dr. Edward Sun, certified in Nuclear Medicine — to devote full time to the Nuclear Medicine imaging procedures. This is undoubtedly one of the most rapidly expanding fields in medicine today.

As has everyone else, we have been plagued by production and delivery delays. New equipment planned for April and August installations is still undelivered, and it looks as though March 1 will be a more realistic date. We now have nine Diagnostic X-Ray rooms, two isotope diagnostic rooms, and one devoted to ultrasound. With such a high capital investment, it becomes important to set up a replacement schedule so that several units do not become inoperative at the same time.

Another area of concern is the increasing cost of services and supplies. X-Ray film which constitutes 12% of our operating budget has just increased 22% in price and a further 8% increase is forecast for later on in the year. The chemical solutions with which the X-Ray films are developed have increased 12% in price. Repair service for our increasingly complex electronic equipment has risen to $30 an hour plus travel time and parking.

With our increasing workload, our patterns are also changing. More and more exams are being performed in the realm of special procedures involving special equipment, or by Radiologists working in conjunction with other physicians. Thus, at a given moment we can have five diagnostic rooms tied up with the specialized examinations. This makes it difficult for the staff technicians to perform the routine examinations in the four remaining rooms.

Our 1972 Annual Report opened with the following statement. "Construction is complete — the workers have gone, and the dust is settled. We have a fine fiscal plan in which to carry out our diagnostic work and one might expect to settle into a fairly stable routine." New methods and new examinations are continually being devised but none of the old are being deleted, so that I would now prophesize that the caseload will increase annually. It behooves us to either increase both personnel and equipment or devise some realistic compromises in an effort to keep the patient costs at a reasonable level. This may be an area in which the decision will not be ours but will be promulgated by the government and third party payers. This will eventually lead to a decline in the quality of medical care. In the meantime there are some exciting advances occurring in Radiology, especially computerized axial tomography. This is a whole new concept of radiographic imaging based on the different adsorption coefficients of different types of tissue in both health and disease. We believe that it is important for a specialty-referral hospital, such as the Deaconess, to have one as soon as possible.

Friends of the N.E. Deaconess Hospital, Inc.

Mrs. Lauriston Ward, Jr., *President*

As one reviews each passing year, one finds a different environment and a different set of problems within the volunteer organization of the Friends of the New England Deaconess Hospital. Compared to previous years, there seems to be a decline in the spirit and the hours given by volunteers.

People apparently have different ideas on volunteerism. Many would rather have a part-time job. Others are afraid to cope with public transportation, parking, the hours they serve, and other problems. And some are apathetic. Apathy affects all segments of volunteerism . . . the hospital, the museum, the symphony alike. Those who volunteer need to remind others just how important it is to give a small portion of one's time to various organizations. In our specific case, to the Deaconess.

Without the Coffee Shop, the Friends have had to turn to other ways of aiding this hospital community.

Our current, most effective resource is the Thrift Shop. Mrs. George I. Rohrbough and Mrs. Laurence P. Dakin report the fantastic total of $20,918.54. This year's profit is $3,834.67 more than was earned last year. This figure carries added importance because it is almost the net income, as the Thrift Shop's expenses are minimal. With the economic picture as it is, more people are searching for usable items such as clothing, housewares, and attractive bric-a-bric, in excellent condition and the Thrift Shop satisfies their search. The ladies in the Thrift Shop do a phenomenal job.

Over the course of the past year the Gift Shop netted $11,300. Sales rose by $2,768.66 to a high of $65,283.87. Although this reflects some inflation, the gross intake has climbed steadily each year since its opening in September, 1970.

Expenses totaled $56,604.51, of which $45,632.39 was for merchandise and $7,642.97 was for salaries. Other expenses included federal and state taxes and miscellaneous items. In September an inventory revealed that gift merchandise stood at $34,291.68 and non-gift items such as candy and drugs stood at $8,409.50. This is an excellent base on which to continue business for the coming year.

The Friends have an agreement with a new floral distributor. The company supplies the gift shop bi-weekly with fresh arrangements priced from $2.50 to $5.95. We also can handle special orders. This company grants us a larger profit margin than our former supplier. Profits from flower sales are integrated within all Gift Shop sales and are not accounted for separately, as in the past.

Due to a change in management policy, our paid managers are now paid by the Friends and not directly by the hospital. The hospital is graciously continuing to pay for the manager by providing to the Friends the sum of $7,540. The Board is most appreciative.

Since August the Gift Shop has been covered at all times by two paid workers and by daily volunteers. Even in such an attractive and friendly place, the shop needs the security which comes from a full "crew".

Hospitality was offered by the Friends at the time of our annual tea, spring luncheon, and, above all, our Christmas open house.

Good will was also shown at our Christmas Bazaar and at the Deaconess Night at the Pops. These two events netted $5,068.21 for the School of Nursing. The Nursing School also benefited from the Methodist Church donations which this year showed a record high of $2,019.85. At the moment our nursing scholarship payments for the year stand at $10,800.

Diversional Therapy must never be overlooked. Patients look forward to the friendly visits, the opportunity to "window shop", and to select and work on a creative project.

The Friends as a group give unstintingly to the Hospital. At our September meeting, the Board voted the sum of $150,000 for the new School of Nursing. This will be paid over a three year span. Including this gift, the Friends will have given over $1,000,000 to hospital projects since their inception.

Although the climate for volunteerism has been cloudy, the Friends have managed to contribute to the Deaconess with generosity and enthusiasm. The Thrift Shop, the Gift Shop, Diversional Therapy, and our many other projects still attract volunteers, although we wish we could have more people interested in the Friends and the hospital. The Friends need those people, who are caring people, so that we can continue our close relationship with the Deaconess.

Balance Sheet

September 29, 1974 and September 30, 1973

Assets

Unrestricted Funds	1974	1973
Current Assets:		
Cash	**$ 533,768**	$ 936,650
Certificates of deposit	**1,879,045**	884,817
Accounts receivable — less allowance of $1,289,800 in 1974 and $1,103,133 in 1973 for uncollectible accounts	**5,713,473**	4,608,375
Grant receivable		400,000
Inventories of supplies — at cost	**317,984**	276,514
Prepaid expenses	**171,452**	193,870
Total current assets	**8,615,722**	7,300,226
Trustee Designated Funds:		
Cash		742,294
Certificates of deposit	**1,239,955**	470,474
Investments (market value: 1974, $205,275; 1973, $176,816) (Note 1)	**261,504**	173,433
Total trustee designated funds	**1,501,459**	1,386,201
Construction Funds (Notes 2 and 3):		
Investments held in trust — cash and U.S. Treasury Bills	**5,834,879**	
Mortgage payment fund — cash and U.S. Treasury Bills	**1,795,676**	
Total construction funds	**7,630,555**	
Property, Plant, and Equipment (Notes 2 and 3)	**22,242,129**	21,132,249
Total	**$39,989,865**	$29,818,676
Restricted Funds		
Special Purpose Funds:		
Cash	**$ 138,685**	$ 280,987
Investments (market value: 1974, $433,937; 1973, $463,353) (Note 1)	**546,953**	399,727
Grants receivable	**268,470**	296,187
Total Special Purpose Funds	**$ 954,108**	$ 976,901
Endowment Funds:		
Cash		$ 192,265
Investments (market value: 1974, $1,979,212; 1973, $2,711,378) (Note 1)	**$2,494,327**	2,366,584
Real estate, equipment, and furnishings — at cost, less accumulated depreciation: 1974, $1,099,192; 1973, $995,457 (Notes 2 and 4)	**4,057,412**	4,137,764
Total Endowment Funds	**$6,551,739**	$6,696,613
Plant Replacement and Expansion Funds:		
Temporary cash investments	**$ 77,829**	$ 77,069

See notes to financial statements.

Liabilities and Fund Balances:

Unrestricted Funds	1974	1973
Current Liabilities:		
Accounts payable and accrued liabilities	**$ 2,606,934**	$ 1,816,086
Accrual for contractual settlements with third-party payors	**756,427**	1,421,807
Deferred nursing school tuition	**354,482**	274,832
Advances from third-party payors	**265,000**	400,973
Total current liabilities	**3,982,843**	3,913,698
Deferred Revenue – Third-party reimbursement (Note 2)	**643,400**	583,400
Long-Term Mortgage Debt (Note 3):		
Massachusetts Health and Educational Facilities Authority — less unamortized discount of $251,088	**14,648,912**	
Other		5,372,048
Fund Balances	**20,714,710**	19,949,530
Total	**$39,989,865**	$29,818,676

Restricted Funds		
Special Purpose Funds:		
Accumulated unexpended gifts and bequests, etc.	**$ 683,059**	$ 709,275
Unexpended research grants	**271,049**	267,626
Total Special Purpose Funds	**$ 954,108**	$ 976,901
Endowment Funds:		
Mortgage note payable (Note 4)	**$2,352,044**	$2,449,268
Fund balances	**4,199,695**	4,247,345
Total Endowment Funds	**$6,551,739**	$6,696,613
Plant Replacement and Expansion Funds:		
Fund balances	**$ 77,829**	$ 77,069

See notes to financial statements.

Statement of Revenues and Expenses

For the fiscal years ended September 29, 1974 (52 weeks) and September 30, 1973 (53 weeks)

	1974	1973
Patient Service Revenue	**$31,639,496**	$29,465,542
Less – Free care, provision for uncollectible accounts, contractual adjustments, etc.	**1,890,585**	2,645,924
Net Patient Service Revenue	**29,748,911**	26,819,618
Other Operating Revenue (Including $867,796 in 1974 and $1,005,996 in 1973 transferred from special purpose funds — Note 1)	**1,426,714**	1,381,822
Total operating revenue	**31,175,625**	28,201,440
Operating Expenses:		
Professional care of patients:		
General	**7,357,302**	6,851,312
Special	**11,226,915**	10,136,536
Household and property	**2,497,574**	2,116,069
Dietary	**2,098,295**	1,869,843
General services and administration	**3,514,208**	3,239,588
Employee benefits	**2,414,124**	2,133,837
Depreciation (Note 2)	**1,063,969**	1,079,136
Research, etc.	**867,796**	1,005,996
Interest	**370,847**	221,863
Total operating expenses	**31,411,030**	28,654,180
Loss From Operations	**235,405**	452,740
Nonoperating Revenue:		
Net income from endowment funds	**143,206**	138,594
Donations and other distributions — net	**104,432**	116,716
Interest, etc.	**228,462**	79,354
Total nonoperating revenue	**476,100**	334,664
Excess (Deficiency) of Revenue Over Expenses	**$ 240,695**	$ (118,076)

See notes to financial statements.

Statement of Changes in Fund Balances

For the fiscal years ended September 29, 1974 (52 weeks) and September 30, 1973 (53 weeks)

	Unrestricted Funds	Restricted Funds		
		Special Purpose Funds	Endowment Funds	Plant Replacement and Expansion Funds
Balance, September 24, 1972	$19,471,355	$ 1,036,281	$4,139,492	$ 133,634
Increases (Decreases):				
Legacies, gifts, etc.	286,834	156,447	115,036	13,300
Building fund receipts				216,987
Grants for specified purposes		785,162		
Investment income		34,150		749
Net loss on sales of investment securities		(7,327)	(7,183)	
Excess of expenses over revenues for the year	(118,076)			
Transfer to other operating revenue		(1,005,996)		
Total	19,640,113	998,717	4,247,345	364,670
Interfund Transfers — Investment in buildings and equipment	309,417	(21,816)		(287,601)
Balance, September 30, 1973	19,949,530	976,901	4,247,345	77,069
Increases (Decreases)				
Legacies, gifts, etc.	349,232	72,601	28	30,978
Building fund receipts				92,312
Grants for specified purposes		762,403		
Investment income		66,018		760
Net loss on sales of investment securities		(4,056)	(36,643)	
Excess of revenues over expenses for the year	240,695			
Transfer to other operating revenue, etc.		(867,796)	(11,035)	
Total	20,539,457	1,006,071	4,199,695	201,119
Interfund Transfers — Investment in buildings and equipment	175,253	(51,963)		(123,290)
Balance, September 29, 1974	$20,714,710	$ 954,108	$4,199,695	$ 77,829

See notes to financial statements

Statement of Changes in Financial Position of Unrestricted Funds

For the fiscal years ended September 29, 1974 (52 weeks) and September 30, 1973 (53 weeks)

	1974	1973
Funds Provided:		
Operations:		
Loss from operations	**$ (235,405)**	$ (452,740)
Add operating expenses not requiring current use of funds:		
Depreciation	**1,063,969**	1,079,136
Increase in deferred third-party reimbursement (Note 2)	**60,000**	72,000
Amortization of bond discount	**17,112**	
Funds provided from operations	**905,676**	698,396
Nonoperating revenue — net	**476,100**	334,664
Total funds provided from operations and nonoperating revenue	**1,381,776**	1,033,060
Proceeds of bond issue (Note 3)	**14,631,800**	
Increase in long-term mortgage debt		520,223
Unrestricted legacies	**349,232**	286,834
Transfers from Restricted Funds	**175,253**	309,417
Total funds provided	**16,538,061**	2,149,534
Funds Applied:		
Reduction of long-term mortgage debt	**5,372,048**	6,202
Payments to mortgage payment fund — net (Note 3)	**1,795,676**	
Purchase of investments by trustee, less construction costs reimbursed of $1,797,170	**5,834,879**	
Additions to property, plant, and equipment	**2,173,849**	1,037,227
Increase in trustee designated funds	**115,258**	168,529
Total funds applied	**15,291,710**	1,211,958
Increase in Working Capital	**$ 1,246,351**	$ 937,576
Summary of Changes in the Components of Working Capital:		
Increase (decrease) in current assets:		
Cash	**$ (402,882)**	$ 727,183
Certificates of deposit	**994,228**	367,600
Receivables — net	**1,105,098**	640,287
Grant receivable	**(400,000)**	
Inventories of supplies	**41,470**	(21,269)
Prepaid expenses	**(22,418)**	68,734
Total	**1,315,496**	1,782,535
Decrease (increase) in current liabilities:		
Accounts payable, etc.	**(790,848)**	25,498
Accrual for contractual settlements with third-party payors	**665,380**	(860,557)
Deferred nursing school tuition	**(79,650)**	(65,027)
Advances from third-party payors	**135,973**	55,127
Total	**(69,145)**	(844,959)
Increase in Working Capital	**$1,246,351**	$ 937,576

See notes to financial statements.

Notes to Financial Statements

1. Accounting Policies

General

The accompanying balance sheet of the Hospital is presented in two basic fund accountabilities of unrestricted and restricted funds. Fund balances restricted by outside sources are included in restricted funds and are distinguished from unrestricted fund balances allocated to specific purposes by action of the Board of Trustees (trustee designated funds).

Restricted gifts and grants and certain miscellaneous income from restricted resources are added to the appropriate restricted funds. Restricted special purpose funds, when expended for current operating purposes, are transferred to unrestricted funds and are reported as other operating revenue.

It is the consistent policy of the Hospital to consider unrestricted legacies received ($349,232 and $286,834 for the fiscal years ended September 29, 1974 and September 30, 1973, respectively) as capital resources and to credit such receipts directly to the unrestricted funds balance. Generally accepted accounting principles for hospitals, as set forth in the Hospital Audit Guide issued by the Committee on Health Care Institutions of the American Institute of Certified Public Accountants, require the reporting of such amounts as nonoperating revenue. Had the aforementioned amounts been so reported, the Hospital would have reported an excess of revenue over expenses of $589,927 in 1974 and $168,758 in 1973.

Investments

Investments are stated at cost or, if received by gift or bequest, at fair market value when received. During 1974 the Hospital pooled substantially all of its investments. The investment pool is operated on the "market-value" method whereby each participating fund is assigned a number of units based on the market value of the assets of the pool at the time of entry of the fund into the pool. Income of pool operations is allocated to participating funds based on their respective shares of the pool.

Other significant accounting policies are set forth in the financial statements and in the notes which follow.

2. Property, Plant, and Equipment

Property, plant, and equipment of unrestricted funds are stated at cost less accumulated depreciation and are summarized as follows:

	1974	*1973*
Land	$ 468,946	$ 468,946
Buildings	13,741,077	13,722,888
Fixed equipment	12,236,273	12,160,301
Major movable equipment	4,727,642	4,525,032
Construction in progress	2,243,859	467,804
Total	33,417,797	31,344,971
Less accumulated depreciation	11,175,668	10,212,722
Property, plant, and equipment — net	$22,242,129	$21,132,249

Depreciation is computed using the straight-line method over the estimated useful lives of depreciable assets. As to certain depreciable assets acquired before 1971, the Hospital uses accelerated depreciation methods to determine reimbursable costs under a third-party reimbursement agreement. The revenue attributable to the excess of accelerated over straight-line depreciation is deferred and will be added to income when the depreciation timing differences reverse. Revenue thus deferred for the fiscal years ended September 29, 1974 and September 30, 1973 amounted to $60,000 and $72,000, respectively.

The Hospital is committed to the construction of a Clinical Laboratory and Radiation Therapy Facility and the purchase of specialized equipment, with an aggregate cost of approximately $6,254,000, of which $1,657,124 is included in construction in progress at September 29, 1974. In addition, construction in progress at September 29, 1974 includes architectural fees and other development costs aggregating $244,480 relating to the construction of a new Nursing School Facility, the total cost of which is estimated to approximate $5,000,000.

3. Long-Term Debt

On November 8, 1973, the Massachusetts Health and Educational Facilities Authority (the Authority) sold $14,900,000 principal amount of revenue bonds, designated New England Deaconess Hospital Issue, Series A, and loaned the proceeds therefrom to the Hospital for the purposes described below. With certain exceptions, principally the Medical Office Building, all of the Hospital's land and buildings (including contents), as well as all new facilities to be constructed from the proceeds of the financing, are pledged as collateral in connection with the mortgage conveyed by the Hospital to the Authority. The Hospital has also granted to the Authority a first lien on certain defined gross receipts (including related accounts receivable) as additional security for payment of the mortgage.

The mortgage proceeds were used first to pay all existing unrestricted fund long-term mortgage debt as of November 8, 1973. The remaining proceeds are being used principally for construction of a Clinical Laboratory and Radiation Therapy Facility and for the purchase of specialized equipment (Note 2). Unexpended proceeds are being held in trust for the Hospital by the Authority.

The mortgage agreement provides for payment by the Hospital to a mortgage payment fund of an initial deposit of principal and interest and subsequent monthly amounts proportionate to the Authority's (a) annual principal payments on sinking fund instalments, ranging from $450,000 in 1976 to $525,000 in 2005, and (b) semiannual interest payments at rates varying from 4.6% to 5.7% over the lives of the bonds.

Auditors' Opinion

4. Mortgage Note Payments

The endowment funds mortgage note bears interest at 5¼% and is payable in monthly instalments through January 1991, including $86,688 due within one year. The Medical Office Building is assigned as collateral under the terms of this mortgage.

5. Employees' Retirement Plan

The Hospital has a noncontributory defined benefit retirement plan covering substantially all full-time employees not over age 55 at date of employment. Total pension expense aggregated $755,000 and $587,000 for the fiscal years ended September 29, 1974 and September 30, 1973, respectively, including amortization over a forty-year period of the unfunded actuarially computed past service liability. Such unfunded liability approximated $4,500,000 at September 29, 1974. Substantially all amounts provided have been paid to the trustee of the plan. The actuarially computed value of vested benefits under the plan at September 29, 1974 exceeded the total of the pension fund net assets by approximately $3,200,000. Plan changes made during the year had the effect of increasing the 1974 provision by approximately $60,000 and future years' provisions by approximately $240,000 annually.

New England Deaconess Hospital:

We have examined the balance sheet of New England Deaconess Hospital as of September 29, 1974 and the related statements of revenues and expenses, changes in fund balances, and changes in financial position of unrestricted funds for the fiscal year (52 weeks) then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements present fairly the financial position of New England Deaconess Hospital as of September 29, 1974 and, except for the effects of crediting unrestricted legacies received directly to unrestricted funds balance instead of recording such receipts as nonoperating revenue as described in Note 1, the results of its operations, changes in its fund balances, and changes in the financial position of its unrestricted funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

November 1, 1974

Officers of the Corporation

Laurens MacLure
Chairman of the Board
C. Vincent Vappi
President
F. Thayer Sanderson
Treasurer
James F. Farr
Vice President
Colby Hewitt, Jr.
Vice President
James T. Mountz
Clerk of the Corporation

Board of Trustees Executive Committee

Laurens MacLure
C. Vincent Vappi
F. Thayer Sanderson
James T. Mountz
John Barnard, Jr.
James F. Farr
Colby Hewitt, Jr.
R. D. Lowry
Albert Pratt
Marvin G. Schorr
Charles L. Smith, Jr.
Humphrey H. Swift
William B. Tyler
*C. Burns Roehrig, M.D.
*M. Donna Younger, M.D.
*Richard E. Lee
**Ex Officio*

Board of Trustees

Class of 1974
John Barnard, Jr.
Vincent P. Clarke
James F. Farr
Colby Hewitt, Jr.
Herbert H. Jaynes
James W. Kelley
Frank M. McGowan
Miss Amelia Peabody
Cornelius E. Sedgwick, M.D.

Class of 1975
Manson H. Carter
William B. Frothingham
John D. Hamilton, Jr.
Bruce Harriman
Charles E. Hilliard
Mrs. Harry L. Jones
James T. Mountz
Henry S. Rogerson
Stephen Sonnabend
C. Vincent Vappi

Class of 1976
Edward G. Carroll
Hollis G. Gerrish
Alexander Marble, M.D.
John H. Meyer
Wilford B. Neptune, M.D.
Albert Pratt
George I. Rohrbough
Marvin G. Schorr

Class of 1977
Herbert D. Adams, M.D.
Mrs. Halfdan Lee
Andrew J. Lord, Jr.
Robert D. Lowry
Laurens MacLure
Marion L. Metcalf
Mrs. George I. Rohrbough
F. Thayer Sanderson
Charles L. Smith, Jr.
Mrs. Sheldon E. Wardwell
Wilbar Whittemore

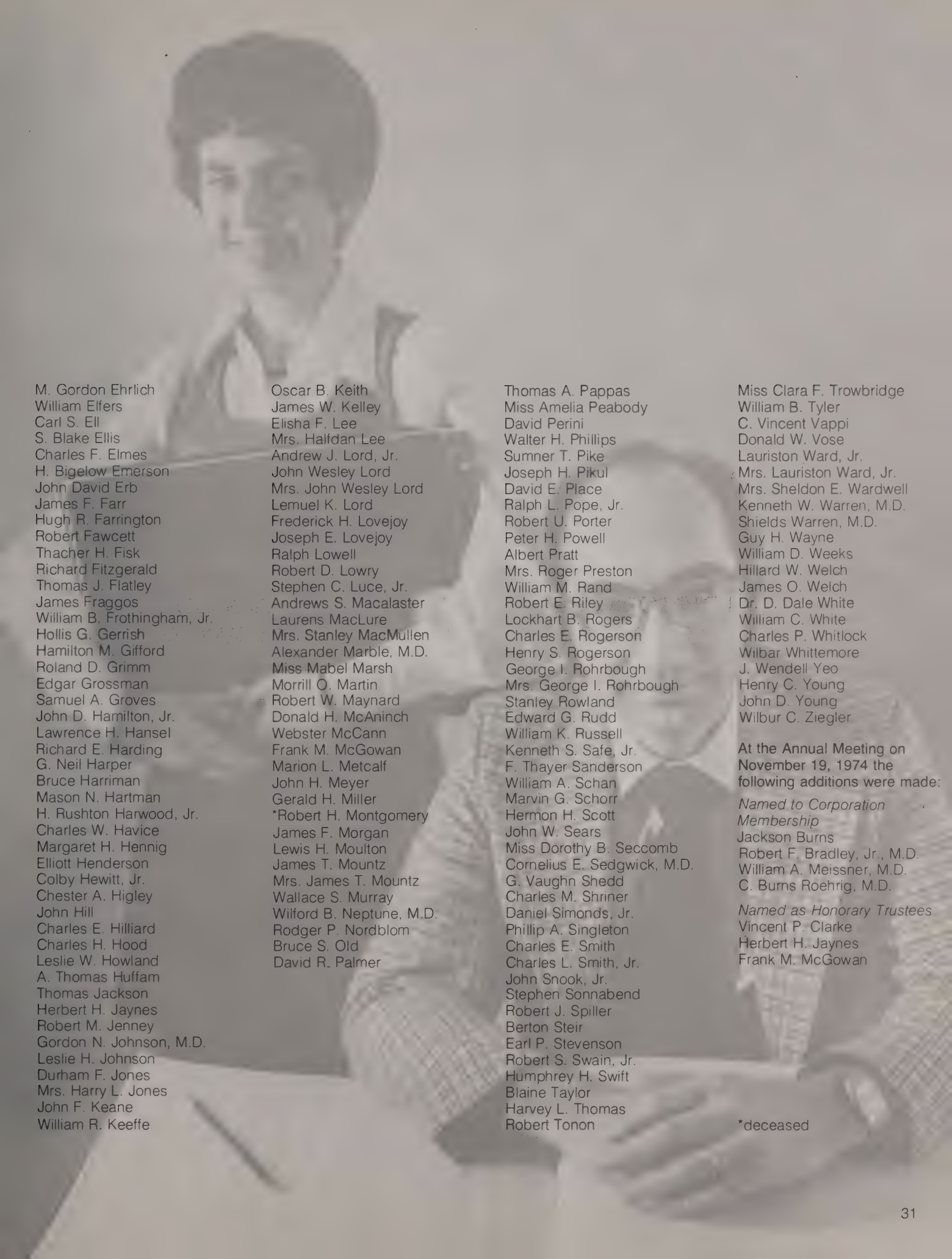
Class of 1978
Warren S. Berg
F. Gorham Brigham, Jr.
John M. Burgess
John I. Carlson, Jr.
David R. Palmer
Lester C. Peabody
Humphrey H. Swift
William B. Tyler
Kenneth W. Warren, M.D.
William D. Weeks

Honorary Trustees

Francis W. Capper
Harold H. Cramer
Edward Dana
Edward Dane
Carl S. Ell
Lawrence H. Hansel
Elliott Henderson
Stephen C. Luce, Jr.
Robert H. Montgomery
William M. Rand
Miss Clara F. Trowbridge

Members of the Corporation

Herbert D. Adams, M.D.
Mrs. William H. Ames
O. Kelley Anderson
F. William Andres
Kent Andrews
Herbert J. Bailey
John A. Bailey
John E. Barclay
John Barnard, Jr.
James A. Batten
Lewis H. Beckford
Robert Belsky
Warren S. Berg
Rene O. Bideaux
Robert L. Blair
Edwin A. Brewer
F. Gorham Brigham, Jr.
William G. Brooks
Dorothy A. Brown
Stanley L. Brown
Robert E. Brownlee, M.D.
John L. Bryan
John M. Burgess
Gordon W.H. Buzza
Francis W. Capper
John I. Carlson, Jr.
Edward G. Carroll
Manson H. Carter
Ernest R. Case
Vessarios G. Chigas
Vincent P. Clarke
Lawrence H. Coburn
Edward H.E. Cooley
W. Walker Cowles
Harold H. Cramer
Wallace R. Creelman
M. Colyer Crum
Lewis G. Curtis
Robert W. Custance
Edward Dana
Edward Dane
Alan R. Davis
Casimir deRham, Jr.
Ernest R. Drake
John M. Dry



M. Gordon Ehrlich
William Elfers
Carl S. Ell
S. Blake Ellis
Charles F. Elmes
H. Bigelow Emerson
John David Erb
James F. Farr
Hugh R. Farrington
Robert Fawcett
Thacher H. Fisk
Richard Fitzgerald
Thomas J. Flatley
James Fraggos
William B. Frothingham, Jr.
Hollis G. Gerrish
Hamilton M. Gifford
Roland D. Grimm
Edgar Grossman
Samuel A. Groves
John D. Hamilton, Jr.
Lawrence H. Hansel
Richard E. Harding
G. Neil Harper
Bruce Harriman
Mason N. Hartman
H. Rushton Harwood, Jr.
Charles W. Havice
Margaret H. Hennig
Elliott Henderson
Colby Hewitt, Jr.
Chester A. Higley
John Hill
Charles E. Hilliard
Charles H. Hood
Leslie W. Howland
A. Thomas Huffam
Thomas Jackson
Herbert H. Jaynes
Robert M. Jenney
Gordon N. Johnson, M.D.
Leslie H. Johnson
Durham F. Jones
Mrs. Harry L. Jones
John F. Keane
William R. Keeffe
Oscar B. Keith
James W. Kelley
Elisha F. Lee
Mrs. Halfdan Lee
Andrew J. Lord, Jr.
John Wesley Lord
Mrs. John Wesley Lord
Lemuel K. Lord
Frederick H. Lovejoy
Joseph E. Lovejoy
Ralph Lowell
Robert D. Lowry
Stephen C. Luce, Jr.
Andrews S. Macalaster
Laurens MacLure
Mrs. Stanley MacMullen
Alexander Marble, M.D.
Miss Mabel Marsh
Morrill O. Martin
Robert W. Maynard
Donald H. McAninch
Webster McCann
Frank M. McGowan
Marion L. Metcalf
John H. Meyer
Gerald H. Miller
*Robert H. Montgomery
James F. Morgan
Lewis H. Moulton
James T. Mountz
Mrs. James T. Mountz
Wallace S. Murray
Wilford B. Neptune, M.D.
Rodger P. Nordblom
Bruce S. Old
David R. Palmer
Thomas A. Pappas
Miss Amelia Peabody
David Perini
Walter H. Phillips
Sumner T. Pike
Joseph H. Pikul
David E. Place
Ralph L. Pope, Jr.
Robert U. Porter
Peter H. Powell
Albert Pratt
Mrs. Roger Preston
William M. Rand
Robert E. Riley
Lockhart B. Rogers
Charles E. Rogerson
Henry S. Rogerson
George I. Rohrbough
Mrs. George I. Rohrbough
Stanley Rowland
Edward G. Rudd
William K. Russell
Kenneth S. Safe, Jr.
F. Thayer Sanderson
William A. Schan
Marvin G. Schorr
Hermon H. Scott
John W. Sears
Miss Dorothy B. Seccomb
Cornelius E. Sedgwick, M.D.
G. Vaughn Shedd
Charles M. Shriner
Daniel Simonds, Jr.
Phillip A. Singleton
Charles E. Smith
Charles L. Smith, Jr.
John Snook, Jr.
Stephen Sonnabend
Robert J. Spiller
Berton Steir
Earl P. Stevenson
Robert S. Swain, Jr.
Humphrey H. Swift
Blaine Taylor
Harvey L. Thomas
Robert Tonon
Miss Clara F. Trowbridge
William B. Tyler
C. Vincent Vappi
Donald W. Vose
Lauriston Ward, Jr.
Mrs. Lauriston Ward, Jr.
Mrs. Sheldon E. Wardwell
Kenneth W. Warren, M.D.
Shields Warren, M.D.
Guy H. Wayne
William D. Weeks
Hillard W. Welch
James O. Welch
Dr. D. Dale White
William C. White
Charles P. Whitlock
Wilbar Whittemore
J. Wendell Yeo
Henry C. Young
John D. Young
Wilbur C. Ziegler

At the Annual Meeting on November 19, 1974 the following additions were made:

Named to Corporation Membership
Jackson Burns
Robert F. Bradley, Jr., M.D.
William A. Meissner, M.D.
C. Burns Roehrig, M.D.

Named as Honorary Trustees
Vincent P. Clarke
Herbert H. Jaynes
Frank M. McGowan

*deceased

Medical Administrative Board

President
C. Burns Roehrig, M.D.
Vice President
M. Donna Younger, M.D.
Eugene P. Clerkin, MD.
Bradley E. Copeland, M.D.
Albert I. DeFriez, M.D.
Samuel Hellman, M.D.
Merle A. Kellett, M.D.
George P. Kozak, M.D.
Cornelius E. Sedgwick, M.D.
James L. Tullis, M.D.
Frank C. Wheelock, Jr., M.D.
Robert E. Wise, M.D.
R.D. Lowry, Secretary
M. Eleanor Clapp, Recording Secretary

Administration

Executive Vice President
R.D. Lowry
Director
Richard E. Lee
Associate Director
Ellen Adams
Assistant Directors
Peter Campisano
Robert D. Pence
Hubert D. Sycamore
Assistant Director and Director of Nursing
Ellen D. Howland
Administrative Assistant
David F. Lilley
Night Administrator
John F. Slayton

Department Managers

Administrative Services
Marjorie M. LeBeau
Ambulatory Services
Paul A. Babcock
Booking
William J. Flatley
Building Services
Joseph E. Doherty
Business Office
Bertina Terkelsen
Chaplain
Martin E. Cernek
Controller
Dean A. Annis
Dietetics
Charlotte L. Donaldson
Employee Relations
Francis Matthews
External Resources
Roger A. Perry, Jr.
Laundry
Roger G. Peterson
Maintenance and Engineering
Cornelius H. Keating
Medical Records
Margaret L. Marhul
Patient Service
William E. Branson
Pharmacy Services
Charles F. Schraub
Public Relations
M. Eleanor Clapp
Purchasing Services
Anthony P. Cavalieri
Security
Francis A. Tenore
Social Service
Gerald E. Cubelli
Surgical Services
Margaret A. Burns
Systems and Planning
Priscilla H. Tinkham
Volunteers
Irma A. Kellner

Medical Staff

Honorary Staff

Herbert D. Adams, M.D.
Frank N. Allan, M.D.
Elmer C. Bartels, M.D.
William P. Beetham, M.D.
Allen G. Brailey, M.D.
Bentley P. Colcock, M.D.
Vernon S. Dick, M.D.
Carl H. Ernlund, M.D.
Earl E. Ewert, M.D.
Frank P. Foster, M.D.
Roger C. Graves, M.D.
George Hammond, M.D.
Albert A. Hornor, M.D.
Lewis M. Hurxthal, M.D.
Harold B. Kenton, Ph.D.
Everett D. Kiefer, M.D.
Frank D. Lathrop, M.D.
Joseph H. Marks, M.D.
Leland S. McKittrick, M.D.
M. Frances H. Smith, M.D.
Carlton R. Souders, M.D.
Neil W. Swinton, Sr., M.D.
Francis M. Woods, M.D.

Department of Medicine

Chairman
James L. Tullis, M.D.

Active Staff

Sidney Alexander, M.D.
Theodore L. Badger, M.D.
C. Cabell Bailey, M.D.
Donald M. Barnett, M.D.
Carl C. Bartels, M.D.
George O. Bell, M.D.
Russell S. Boles, Jr., M.D.
Robert F. Bradley, Jr., M.D.
Donald J. Breslin, M.D.
Robert E. Brownlee, M.D.
A. Richard Christlieb, M.D.
Eugene P. Clerkin, M.D.
Laurence P. Cloud, M.D.
Robert E. Crozier, M.D.
Donat P. Cyr, M.D.
Albert I. DeFriez, M.D.
Robert A. England, M.D.
B. Dan Ferguson, M.D.
Luis Fernandez-Herlihey, M.D.
Richard M. Finkel M.D.
Jurgen H. Fischer, M.D.
T. Corwin Fleming, M.D.
Robert E. Foley, M.D.
John L. Fromer, M.D.
S. Peter Gibb, M.D.
H. Howard Goldstein, M.D.
James A. Gregg, M.D.
William B. Hadley, M.D.
Elmer W. Heffernon, M.D.
Elmer E. Hinton, M.D.
Frank A. Howard, M.D.
Lyman H. Hoyt, M.D.
Allen P. Joslin, M.D.
H. Stephen Kott, M.D.
George P. Kozak, M.D.
Leo P. Krall, M.D.
Edwin J. Kroeker, M.D.
O. Stevens Leland, M.D.
Harold D. Levine, M.D.
Simeon Locke, M.D.
George E. MacDonald, M.D.

Joseph E. Mackie, M.D.
Robert J. MacMillan, M.D.
James S. Mansfield, M.D.
Alexander Marble, M.D.
F. William Marlow, Jr., M.D.
L. Tillman McDaniel, M.D.
Francis E. McDonough, M.D.
Samuel L. Moschella, M.D.
John W. Norcross, M.D.
F. Warren Nugent, M.D.
Richard A. Oberfield, M.D.
John M. O'Loughlin, M.D.
A. Seymour Parker, Jr., M.D.
Artemis G. Pazianos, M.D.
Carey M. Peters, M.D.
M.D. Phelps, Jr., M.D.
Hugh M. Pyle, M.D.
C. Burns Roehrig, M.D.
Barbara J. Rosen, M.D.
Victor M. Rosenoer, M.D.
John R. Ross, M.D.
David I. Rutledge, M.D.
Jules R. Schwaber, M.D.
Albert L. Sheffer, M.D.
Neil W. Swinton, Jr., M.D.
Frank J. Takacs, M.D.
Robert F. Tilley, M.D.
E. Laurie Tolman, M.D.
Charles Trey, M.D.
Walter I. Tucker, M.D.
James L. Tullis, M.D.
Stephen L. Wanger, M.D.
Fred F. Whitcomb, Jr., M.D.
Priscilla White, M.D.
Marvin S. Wool, M.D.
M. Donna Younger, M.D.
Henry E. Zellman, M.D.

Associate Staff
Joseph L. Andrews, M.D.
Henry H. Babcock, M.D.
Gerald F. Bigwood, M.D.
Joseph H. Bowlds, M.D.
Henry Colcher, M.D.
John A. D'Elia, M.D.
Thomas M. Flood, M.D.
Mamigon M. Garabedian, M.D.
Gisella Garan, M.D.
Charles A. Graham, M.D.
Michael A. Greenwald, M.D.
Fouad Z. Hamawy, M.D.
John W. Hare, M.D.
Robert W. Healy, M.D.
Steven V. Hershenow, M.D.
John Hinman, M.D.
Arthur R. Hughes, M.D.
Harvey R. Jones, Jr., M.D.
Samir D. Kassissieh, M.D.
Norman Kattwinkel, M.D.
Joseph E. Kelleher, M.D.
John Lockhart, M.D.
Burton G. Mandel, M.D.
John J. Mogan, M.D.
Ahmed Mohiuddin, M.D.
Charles Z. Naggar, M.D.
Herbert A. Selenkow, M.D.
John A. Shea, M.D.
Dana M. Sheldon, M.D.
Samuel J. Shubrooks, Jr., M.D.
J. Stuart Soeldner, M.D.
Martha Skinner, M.D.
James T. Sparks, M.D.
David M. Steinberg, M.D.
Philip R. Sullivan, M.D.
Jens N.F. Touborg, M.D.

Consulting Staff
Peter Braun, M.D.
George F. Cahill, Jr., M.D.
Earle M. Chapman, M.D.
Laurence B. Ellis, M.D.
Henry M. Fox, M.D.
Basil C. Gray, M.D.
David M. Holmes, M.D.
Philip L. Isenberg, M.D.
Thomas F. O'Brien, M.D.
Jiri Palek, M.D.
Ian Paley Rak, M.D.
Stephen Schoenbaum, M.D.
Richard P. Stetson, M.D.

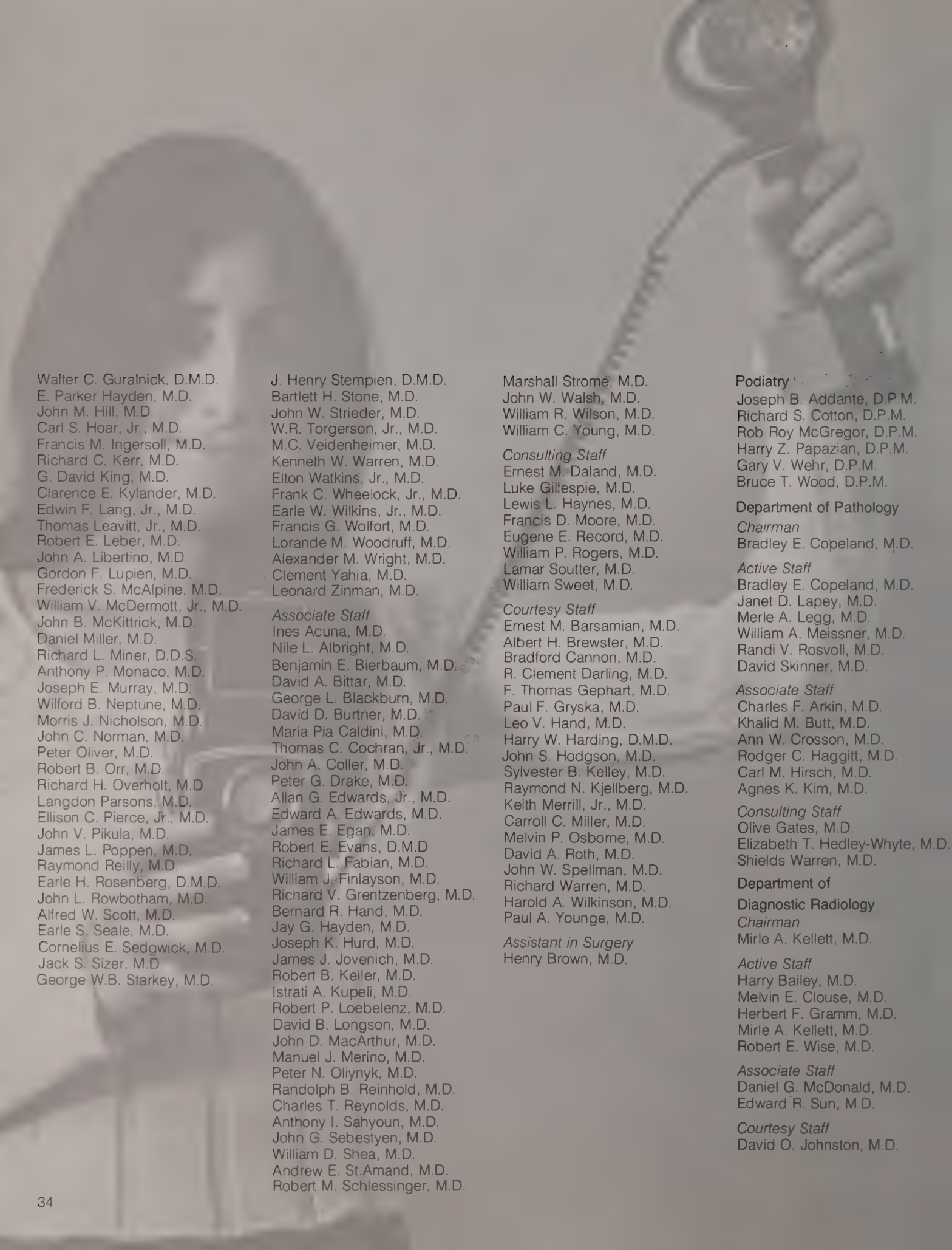
Courtesy Staff
Donnell W. Boardman, M.D.
W. Richard Burack, M.D.
John W. Cass, Jr., M.D.
Edgar S. Cathcart, M.D.
James F. Cummings, M.D.
Robert Fleming, M.D.
Earl I. Hammer, M.D.
Arthur J. Lockhart, M.D.
Oscar J. Raeder, M.D.
Herbert S. Sise, M.D.
Martin L. Tracey, M.D.
Susan Wainger, M.D.

Assistants in Medicine
Anthony D. Bower, M.D.
Francis Chao, M.D.
Geoffrey E. Clark, M.D.
Joseph Dotolo, M.D.
Diane Kenney, Ph.D.
Frederick Murphy, M.D.
Kollegal S. Murthy, M.D.
Joseph E. Tuthill, M.D.

Department of Surgery

Chairman
Cornelius E. Sedgwick, M.D.

Active Staff
Frederick W. Ackroyd, M.D.
Lloyd M. Aiello, M.D.
Hollis L. Albright, M.D.
Menelaos Aliapoulios, M.D.
Thomas J. Anglem, M.D.
Mian M. Ashraf, M.D.
Francis J. Audin, M.D.
H.T. Ballantine, Jr., M.D.
Frank D. Bates, M.D.
James A. Bougas, M.D.
David P. Boyd, M.D.
John W. Braasch, M.D.
John R. Brooks, M.D.
Blake Cady, M.D.
Robert W. Cali, M.D.
Edward B. Connolly, Jr., M.D.
Edward H. Copenhaver, M.D.
Marvin L. Corman, M.D.
Joseph P. Crehan, M.D.
Robert E. Desautels, M.D.
Willard E. Dotter, M.D.
Joseph B. Dowd, M.D.
F. Henry Ellis, M.D.
Charles A. Fager, M.D.
Lloyd D. Flint, M.D.
Clifford C. Franseen, M.D.
Stephen R. Friedberg, M.D.
Gerald G. Garcelon, M.D.
George Gifford, Jr., M.D.
Thomas H. Greene, Jr., M.D.



Walter C. Guralnick, D.M.D.
E. Parker Hayden, M.D.
John M. Hill, M.D.
Carl S. Hoar, Jr., M.D.
Francis M. Ingersoll, M.D.
Richard C. Kerr, M.D.
G. David King, M.D.
Clarence E. Kylander, M.D.
Edwin F. Lang, Jr., M.D.
Thomas Leavitt, Jr., M.D.
Robert E. Leber, M.D.
John A. Libertino, M.D.
Gordon F. Lupien, M.D.
Frederick S. McAlpine, M.D.
William V. McDermott, Jr., M.D.
John B. McKittrick, M.D.
Daniel Miller, M.D.
Richard L. Miner, D.D.S.
Anthony P. Monaco, M.D.
Joseph E. Murray, M.D.
Wilford B. Neptune, M.D.
Morris J. Nicholson, M.D.
John C. Norman, M.D.
Peter Oliver, M.D.
Robert B. Orr, M.D.
Richard H. Overholt, M.D.
Langdon Parsons, M.D.
Ellison C. Pierce, Jr., M.D.
John V. Pikula, M.D.
James L. Poppen, M.D.
Raymond Reilly, M.D.
Earle H. Rosenberg, D.M.D.
John L. Rowbotham, M.D.
Alfred W. Scott, M.D.
Earle S. Seale, M.D.
Cornelius E. Sedgwick, M.D.
Jack S. Sizer, M.D.
George W.B. Starkey, M.D.

J. Henry Stempien, D.M.D.
Bartlett H. Stone, M.D.
John W. Strieder, M.D.
W.R. Torgerson, Jr., M.D.
M.C. Veidenheimer, M.D.
Kenneth W. Warren, M.D.
Elton Watkins, Jr., M.D.
Frank C. Wheelock, Jr., M.D.
Earle W. Wilkins, Jr., M.D.
Francis G. Wolfort, M.D.
Lorande M. Woodruff, M.D.
Alexander M. Wright, M.D.
Clement Yahia, M.D.
Leonard Zinman, M.D.

Associate Staff
Ines Acuna, M.D.
Nile L. Albright, M.D.
Benjamin E. Bierbaum, M.D.
David A. Bittar, M.D.
George L. Blackburn, M.D.
David D. Burtner, M.D.
Maria Pia Caldini, M.D.
Thomas C. Cochran, Jr., M.D.
John A. Coller, M.D.
Peter G. Drake, M.D.
Allan G. Edwards, Jr., M.D.
Edward A. Edwards, M.D.
James E. Egan, M.D.
Robert E. Evans, D.M.D
Richard L. Fabian, M.D.
William J. Finlayson, M.D.
Richard V. Grentzenberg, M.D.
Bernard R. Hand, M.D.
Jay G. Hayden, M.D.
Joseph K. Hurd, M.D.
James J. Jovenich, M.D.
Robert B. Keller, M.D.
Istrati A. Kupeli, M.D.
Robert P. Loebelenz, M.D.
David B. Longson, M.D.
John D. MacArthur, M.D.
Manuel J. Merino, M.D.
Peter N. Oliynyk, M.D.
Randolph B. Reinhold, M.D.
Charles T. Reynolds, M.D.
Anthony I. Sahyoun, M.D.
John G. Sebestyen, M.D.
William D. Shea, M.D.
Andrew E. St.Amand, M.D.
Robert M. Schlessinger, M.D.

Marshall Strome, M.D.
John W. Walsh, M.D.
William R. Wilson, M.D.
William C. Young, M.D.

Consulting Staff
Ernest M. Daland, M.D.
Luke Gillespie, M.D.
Lewis L. Haynes, M.D.
Francis D. Moore, M.D.
Eugene E. Record, M.D.
William P. Rogers, M.D.
Lamar Soutter, M.D.
William Sweet, M.D.

Courtesy Staff
Ernest M. Barsamian, M.D.
Albert H. Brewster, M.D.
Bradford Cannon, M.D.
R. Clement Darling, M.D.
F. Thomas Gephart, M.D.
Paul F. Gryska, M.D.
Leo V. Hand, M.D.
Harry W. Harding, D.M.D.
John S. Hodgson, M.D.
Sylvester B. Kelley, M.D.
Raymond N. Kjellberg, M.D.
Keith Merrill, Jr., M.D.
Carroll C. Miller, M.D.
Melvin P. Osborne, M.D.
David A. Roth, M.D.
John W. Spellman, M.D.
Richard Warren, M.D.
Harold A. Wilkinson, M.D.
Paul A. Younge, M.D.

Assistant in Surgery
Henry Brown, M.D.

Podiatry
Joseph B. Addante, D.P.M.
Richard S. Cotton, D.P.M.
Rob Roy McGregor, D.P.M.
Harry Z. Papazian, D.P.M.
Gary V. Wehr, D.P.M.
Bruce T. Wood, D.P.M.

Department of Pathology
Chairman
Bradley E. Copeland, M.D.

Active Staff
Bradley E. Copeland, M.D.
Janet D. Lapey, M.D.
Merle A. Legg, M.D.
William A. Meissner, M.D.
Randi V. Rosvoll, M.D.
David Skinner, M.D.

Associate Staff
Charles F. Arkin, M.D.
Khalid M. Butt, M.D.
Ann W. Crosson, M.D.
Rodger C. Haggitt, M.D.
Carl M. Hirsch, M.D.
Agnes K. Kim, M.D.

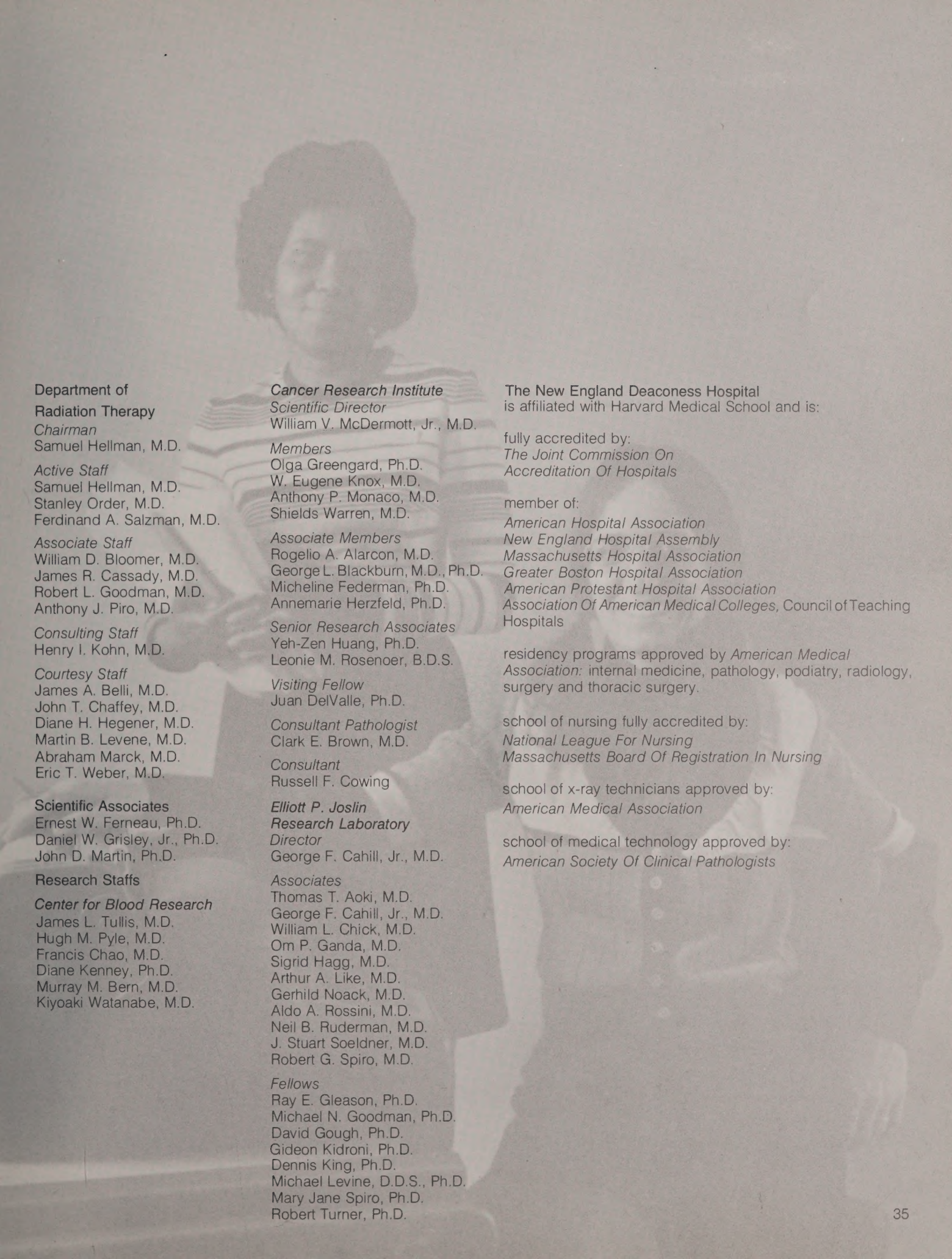
Consulting Staff
Olive Gates, M.D.
Elizabeth T. Hedley-Whyte, M.D.
Shields Warren, M.D.

Department of Diagnostic Radiology
Chairman
Mirle A. Kellett, M.D.

Active Staff
Harry Bailey, M.D.
Melvin E. Clouse, M.D.
Herbert F. Gramm, M.D.
Mirle A. Kellett, M.D.
Robert E. Wise, M.D.

Associate Staff
Daniel G. McDonald, M.D.
Edward R. Sun, M.D.

Courtesy Staff
David O. Johnston, M.D.



Department of Radiation Therapy

Chairman
Samuel Hellman, M.D.

Active Staff
Samuel Hellman, M.D.
Stanley Order, M.D.
Ferdinand A. Salzman, M.D.

Associate Staff
William D. Bloomer, M.D.
James R. Cassady, M.D.
Robert L. Goodman, M.D.
Anthony J. Piro, M.D.

Consulting Staff
Henry I. Kohn, M.D.

Courtesy Staff
James A. Belli, M.D.
John T. Chaffey, M.D.
Diane H. Hegener, M.D.
Martin B. Levene, M.D.
Abraham Marck, M.D.
Eric T. Weber, M.D.

Scientific Associates
Ernest W. Ferneau, Ph.D.
Daniel W. Grisley, Jr., Ph.D.
John D. Martin, Ph.D.

Research Staffs

Center for Blood Research
James L. Tullis, M.D.
Hugh M. Pyle, M.D.
Francis Chao, M.D.
Diane Kenney, Ph.D.
Murray M. Bern, M.D.
Kiyoaki Watanabe, M.D.

Cancer Research Institute
Scientific Director
William V. McDermott, Jr., M.D.

Members
Olga Greengard, Ph.D.
W. Eugene Knox, M.D.
Anthony P. Monaco, M.D.
Shields Warren, M.D.

Associate Members
Rogelio A. Alarcon, M.D.
George L. Blackburn, M.D., Ph.D.
Micheline Federman, Ph.D.
Annemarie Herzfeld, Ph.D.

Senior Research Associates
Yeh-Zen Huang, Ph.D.
Leonie M. Rosenoer, B.D.S.

Visiting Fellow
Juan DelValle, Ph.D.

Consultant Pathologist
Clark E. Brown, M.D.

Consultant
Russell F. Cowing

Elliott P. Joslin Research Laboratory
Director
George F. Cahill, Jr., M.D.

Associates
Thomas T. Aoki, M.D.
George F. Cahill, Jr., M.D.
William L. Chick, M.D.
Om P. Ganda, M.D.
Sigrid Hagg, M.D.
Arthur A. Like, M.D.
Gerhild Noack, M.D.
Aldo A. Rossini, M.D.
Neil B. Ruderman, M.D.
J. Stuart Soeldner, M.D.
Robert G. Spiro, M.D.

Fellows
Ray E. Gleason, Ph.D.
Michael N. Goodman, Ph.D.
David Gough, Ph.D.
Gideon Kidroni, Ph.D.
Dennis King, Ph.D.
Michael Levine, D.D.S., Ph.D.
Mary Jane Spiro, Ph.D.
Robert Turner, Ph.D.

The New England Deaconess Hospital
is affiliated with Harvard Medical School and is:

fully accredited by:
The Joint Commission On Accreditation Of Hospitals

member of:
American Hospital Association
New England Hospital Assembly
Massachusetts Hospital Association
Greater Boston Hospital Association
American Protestant Hospital Association
Association Of American Medical Colleges, Council of Teaching Hospitals

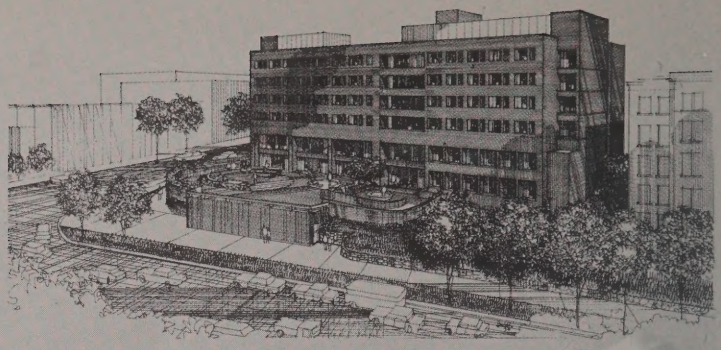
residency programs approved by *American Medical Association:* internal medicine, pathology, podiatry, radiology, surgery and thoracic surgery.

school of nursing fully accredited by:
National League For Nursing
Massachusetts Board Of Registration In Nursing

school of x-ray technicians approved by:
American Medical Association

school of medical technology approved by:
American Society Of Clinical Pathologists

New School of Nursing Facility



Construction will soon begin on a building at the corner of the Riverway and Longwood Avenue to house the school of nursing. Four floors of the seven story structure will be for dormitory space while the first three levels will be occupied by offices, classrooms, conference rooms and a library. The facility is expected to be ready for occupancy in the spring of 1976.

For those having experienced the comfort and skill of competent nursing care this is an opportunity to ensure that level of care to future patients.

☐ Enclosed find $_____ as my contribution to help construct the new School of Nursing building.

☐ I or we pledge $_____ to be paid quarterly over three years 1975/1976/1977.

New England Deaconess Hospital 185 Pilgrim Road, Boston, Massachusetts 02215